THE SCHOOL REVIEW
A JOURNAL OF SECONDARY EDUCATION

VOLUME XIX
NUMBER 2

FEBRUARY, 1911

WHOLE
NUMBER 182

ENTRANCE REQUIREMENTS AND "COLLEGE DOMINATION" AS SOURCES OF MOTIVATION IN HIGH-SCHOOL WORK[1]

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I may confess at the outset to a very decided prejudice against what is ordinarily termed "college domination." That prejudice has been derived from a good many years of experience in the service of the lower schools. I am naturally jealous of the fruits of that experience. I paid the price of some sleepless nights and a good many long-drawn-out, bitter days for whatever practical knowledge I may possess of ways and means of meeting public-school problems. If there is anything that today rouses my ire, it is for someone who has not faced and solved similar situations to make light either of the difficulties that inhere in the actual concrete problems of the lower schools or the value of the experience that comes from facing and solving these problems.

I must hasten to add, however, that continued association with university men leads me more and more to conclude that I was once quite wrong in placing all or even a large majority of them in the class of critics and fault-finders. I do not say that the university communities are entirely devoid of such men. In

[1] Read at the General Conference of the Academies and High Schools in Relations with the University of Chicago, November 12, 1910.

fact, the attitude of Brahmanism is still all too frequently to be noticed, especially among the younger men, and I think that it is this attitude that public-school people are likely to notice. When this attitude influences—as it will inevitably influence—the discussions of college-entrance requirements, public-school men are likely to characterize it as college "domination" of secondary-school policies. The more experienced and influential college and university men, however, recognize the significance that must always attach to specialized adjustments in any field of human activity. I can think of no fairer attitude that a university man could take toward elementary- and secondary-school problems than that represented by Professor John M. Coulter's admirable paper read before the recent meeting of the Northern Illinois Teachers' Association.

That university and college men should legislate upon the matter of college-entrance requirements without co-operation of secondary-school men is, I think, indefensible. That secondary-school men should be intrusted with the authority to determine entrance requirements for the colleges is equally indefensible. What is needed is just what is indicated in the word "co-operation"; just what is represented by this and by other conferences between universities and secondary schools. We must approach the problem of entrance-requirements each with a firm determination to recognize what is valuable in the prejudices of the other.

For I do not believe that prejudices can or should be entirely read out of our deliberations. Prejudices are generally the resultant attitudes which come out of the continued operation of ideals. The university man is dominated primarily by the ideals of science. The aim of his life is to search for truth, and he deifies truth for its own sake. Truth is, for him, an ultimate standard, a pure value. Now, the continued operation of this ideal, as I have suggested, gradually engenders a prejudice—gradually leads him to react emotionally and instantaneously against any proposal that is in the slightest way inconsistent with his ideal. In the secondary schools, on the other hand, the dominant ideal is coming very rapidly to be the

ideal of service. The high-school principal is measuring the value of his work by the service that he renders to the community. And this ideal also engenders in time a powerful prejudice, an instantaneous emotional reaction against anything that is inconsistent with the greatest service to the greatest number.

It is, I think, in the inevitable conflict between these two ideals that our present irritating problems concerning entrance requirements have their origin. Now what is needed is, to my mind, not a surrender of these ideals by either party to the controversy. Both types are needed, and, as Professor Coulter so clearly showed in the paper to which I have just referred, there is nothing inconsistent in the co-operation of both ideals. It is good for the man of science to hold truth as an ultimate value, for in the long run he will render much more efficient service under the operation of this ideal than he would render should he discard it. It is also good for the high-school man to look carefully into the needs of his community, and to determine as accurately as possible how to meet these needs, irrespective of their relation to the fulfilling of entrance requirements. Ideals, I repeat, must vary with the work that one does in life. If we all had precisely the same ideals and precisely the same standards of worth, this would be not only a very dreary and uninteresting life, but also a very ineffective life.

What is needed, then, is not a surrender of ideals by either party to the controversy; it is rather the adjustment of ideals. The right kind of college "domination" will provide a useful check upon the development of the high schools; and the proper degree of independence and initiative upon the part of the high schools will provide a useful check upon the demands of the colleges which might otherwise become inordinate and unfair. The ideal of the high school is service to the community; but this ideal, unchecked, is likely to become so narrow as to defeat in some measure its own purpose. The ideal of the university is truth established by the rigorous methods of science; but, unchecked, this is likely to prescribe conditions which the adolescent pupil will find it difficult or impossible to fulfil, the essential

features of which could be fulfilled by the subject-matter and methods more in harmony with community needs. It is well for every man to be enthusiastic concerning the work that he does; but this very enthusiasm implies the value of a check and control that shall hold the expression of his enthusiasm within healthful limits.

I am particularly anxious to emphasize this point, for I am convinced that university and high-school men very frequently misunderstand one another because of this conflict of ideals. I know university men who labor under the impression that their colleagues in the lower schools are dominated by unworthy motives when they request that certain subjects be granted entrance credits. They insist that these high-school men have in mind only the growth of their schools in numbers, and the consequent glory that will accrue to themselves if they build up a large enrolment. This inference, it is needless to say, is purely gratuitous. The high-school man may be, and in most cases he is, I am confident, thoroughly sincere. He has his own problem to meet—a problem which is bigger and broader than merely meeting entrance requirements; and he must strive to solve that problem. On the other hand, I know high-school men who look upon their university colleagues as persons who hold in contempt the judgment of men in the lower schools concerning educational values, and who either cannot or will not see the industrial and commercial and social life of the community as playing any part whatsoever in determining such values. This, again, is an unjust assumption; for the university man is also sincere in his attitude and, although there are men in the universities who have an air of intolerance toward the workers in the lower schools, whom they should in all conscience look upon as colleagues and not as subordinates, these men are not, as I have attempted to point out, either numerous or influential.

I have spoken of this phase of so-called college domination because it is the type that most people have in mind, I believe, when they use the term; and what I wish to point out is simply that, in this sense of the term, college domination is, in the

Middle West, largely imaginary. There is a sense, however, in which college domination is far from imaginary, and since both forms have some relation to the matter of motivation which it is my especial province to touch I shall refer briefly to this latter type.

The disastrous type of college domination of secondary schools is represented by the lack of professional standards in the training of secondary-school teachers. By professional standards I mean unique standards and criteria relating primarily to secondary education as distinguished from higher education. In this respect, the preparation of high-school teachers is far behind the preparation of elementary teachers, for the latter, in their normal-school courses, have their attention directed to the specific and unique problems of elementary education, and are adjusted to the elementary-school situation through the medium of practice-teaching with its close supervision and the serious import which always attaches to it in the normal-school course. The teacher going into the high school has in the university been trained in the subject-matter that he is expected to teach, but his professional education is commonly *nil*, and in only a few universities today is this training made effective through actual adjustment in the practice-school. The situation is precisely similar to that which would confront elementary education should it recruit its teachers exclusively from high-school graduates, and demand from them no specific professional training.

Now I believe that most of the evils that are associated in the popular mind with college domination have their root in this condition. A few days ago I received a long and interesting letter from a man who is dissatisfied with the high-school conditions and who is inclined to believe that college domination is responsible for the evils that he condemns. He had seen this topic in our program and accordingly gave me his views. His chief point of criticism is that the work of the high school is measured by standards that are adapted to the more mature university student, but quite unadapted to the high-school adolescent. To cite one statement from his letter:

> The course of English literature which the Senior pupils of our high school are subjected to is practically identical with the course which I had in the University of Michigan, and which *no college student was allowed to be admitted to until he was a Junior.*

My correspondent may be in error in this and in other criticisms that he makes, but I am inclined to believe that there is a large measure of justification in his strictures. They would not, of course, hold for all high schools, but that they hold for a great many in which the classroom teachers are fresh from university courses there can be little reasonable doubt. It is generally admitted by high-school men that the customary courses in secondary-school science, for example, are ill-adapted to the average high-school pupil, and largely because they have borrowed too liberally from the content and method of university courses. Both secondary science and secondary literature have functions that are different from the functions of the cognate subjects in the university and yet there is now very little differentiation as to either matter or method.

Now I maintain that this is due largely to the indirect domination to which I have referred—to the lack among the high-school teachers themselves of definite and unique standards of the type of content, the type of approach, and the type of method which best meet the needs of the high-school pupils. And this condition will continue so long as the universities fail to provide professional courses similar to those provided in the normal school for elementary teachers.

Those of us who represent in the universities the needs and ideals of the lower schools—those of us, in other words, who are connected with the educational departments of the universities—are constantly facing the problem of providing the candidates for high-school teaching with an effective complement of professional ideals. I have sometimes been told by my colleagues, and in all seriousness, that candidates for secondary teacherships could much more profitably spend all their available time in mastering the subject-matter than spend a fraction of it in professional study. And yet an investigation that I made last year among the principals and superintendents who

employ our graduates shows that in no single instance did a graduate fail because of lack of subject-matter, and that in every case of failure which I could find the failure was due to lack of qualities which might have been provided by the proper sort of professional training or the inherent lack of which would certainly have been revealed by a course in practice-teaching.

I maintain that what my correspondent attributes to college domination *is* due to college domination in the last analysis, but that it is not due to the kind of domination which he has in mind. It is the indirect but much more insidious and dangerous domination of college methods and college standards carried down into the high school by college graduates because these are the only methods and the only standards that are fresh enough in their minds to be applied. This is a vastly different kind of domination from that which is meant by most people when they use the term, who have in mind the university man with the big stick of entrance-requirements, clubbing the high schools into an arbitrary line. The high-school visitors of the universities of the Middle West are, so far as I know, essentially public-school men. Those with whom I have talked deplore the conditions that I have described just as thoroughly as my correspondent deplores such conditions. They believe that the high schools should have their own distinctive ideals and adhere to them.

And now I have only the briefest time in which to discuss the relation between college-entrance requirements and college denomination on the one hand and the problem of motivation on the other.

First of all, I must state what I mean by motivation and what I think to be the significance of this concept in educational theory. In essence, a motive is the idea of an end, more or less remote, that is to be attained through a series of efforts. There is nothing markedly different between what we are today calling proper motivation and what the older writers upon school management discussed under the head of "incentives." Indeed, White's classification of incentives as natural or artificial might well serve as the text for a present-day sermon upon proper

motivation of school work. We are, however, approaching the subject from a slightly different angle, and in the light of broader principles.

It has been urged that the motives that dominate the pupil in the mastery of knowledge or in the acquisition of habit determine the efficiency of that knowledge or habit in serving as an instrument in the solution of later problems. This is, the possibility of connecting knowledge or habit with the real problems of later life will be the greater, the more closely the initial mastery of knowledge or habit has been related to similar vital problems. It is generally agreed, for example, that a pupil who learns to spell or to compose or to compute because he appreciates the significance of spelling or composition or computation in solving real life-problems will find a much more extended application for these arts than one who has mastered them arbitrarily.

While I believe that there is much to be commended in this argument, its force is somewhat weakened by certain well-known facts. Experience clearly shows that some facts and some habits acquired without particular reference to what we term real life-problems are still available for later use. Indeed, nature itself, through the instincts of curiosity, play, and repetition, has provided for the acquisition of useful information and useful habits at a time when the child has not the slightest conception of their true function. Watch a little two-year-old catch a word that he hears, and repeat it over and over again for the mere delight that the repetition affords. He is undergoing a drill process which has, to his consciousness, no significance aside from the fact that it satisfies an immediate and instinctive desire. And yet the adjustments that he is mastering and reducing to automatic control are very obviously of prime importance in later situations.

I confess that I have found no little difficulty in harmonizing these instinctive tendencies with that doctrine of motivation which insists that habits and knowledge gained outside the matrix of real life-problems will not function later with reference to such problems. Nature, with its adaptive instincts of play,

curiosity, and imitative repetition, seems to have decreed otherwise, and to have executed this decree with marked efficiency.

My own solution of this problem may not appeal to you as convincing, but I shall give it to you for what it is worth. I believe that as many of the essential habits as possible should be fixed through the operation of the native instincts, without going out of our way to search for more involved motives. It is much simpler, and I believe no less effective, to have many of the simpler number and language habits mastered in this way, than it is to lead the child through a complicated process of reasoning to see the utility of these habits in solving what we call real problems. And similarly I believe that wherever native curiosity will serve to fix facts or form an approach to principles of explanation it is wise economy to lay hold of this curiosity and work it for all that it is worth.

There comes a time, however, when native interest flags. The more complicated habit-groups can seldom be adequately mastered in this way. The delight in repetition comes to an end before automatic control has been acquired. It is then that the real worth of the habit should be utilized if possible to motivate its mastery. It is then that the pupil should be led to see that undergoing the discipline of repetition results in a mastery that is unequivocally of service to him. If we can insure this recognition of the "worthwhileness" of the discipline, we are doing something more than making our drill-process effective and economical as such. We are teaching the pupil the most important of all lessons. "Genius," says George Eliot, "is little more than a great capacity for receiving discipline"; and we may supplement this by saying that discipline is doing things that we do not wish to do for the sake of attaining an end that is worth while. We cannot make all of our pupils into geniuses, but we can increase our pupils' capacity for discipline. If through showing them over and over again the "worthwhileness" of sustained effort we can get them to subject themselves more willingly to disciplinary processes, we shall do much toward increasing the sum-total of human achievement.

The older education was often blind to this possibility. It required repetition far beyond the point where repetition is an instinctive delight. But it did not always recognize the importance of convincing the pupil that this repetition really issued in increased power, really contributed to his ability to solve problems. It is because the modern doctrine of motivation impels the teacher to search for ends or motives the realization of which will in the end justify an arduous process of discipline that it appeals to me. Interpreted in this way it is the very opposite of the sugar-coating process against which all of us have a most justifiable prejudice. To lead the child to think the things in life that are most worth doing are easy to do is to teach him a lie—a lie which many unfortunate children have had to unlearn through the bitter experience of later years. But the doctrine of motivation does not mean sugar-coating. It does not mean giving the pupil the impression that good things come without effort. It rather sanctions effort by bringing the effort into an intimate relation with the results. Properly applied, it will lead the pupil to look upon his own little achievements as types of all achievement—will lead him to see that Peary conquering the Pole, or Wilbur Wright constructing the aeroplane, or Morse struggling through long years of poverty and suffering to perfect the telegraph, underwent experiences that differ only in degree and not in kind from the experiences of the school. This is the only way to make school and life synonymous in the true sense, for the essential worth of human life is struggle and self-sacrifice and the subordination of immediate desire to ultimate purpose.

There is little doubt in my own mind that the very fact that the high school prepares for college gives to many pupils an increased respect for the work of the school, a respect which in itself adds to the conviction that its mastery is worth while. But this motive should be purely supplementary and not fundamental. The great defect of much of our present-day teaching in the secondary school lies in the fact that the entrance requirements are looked upon by the teachers in an arbitrary way. That is, the teaching aims

only at such mastery as shall fulfil formal entrance requirements, and consequently misses many of the rich values which these studies might realize. The spur of entrance requirements should be an accessory motive both to the pupil and to the teacher. And when the pupil reaches college he should find, as I fear he does not always find today, that the work he has done really prepares him for college work—that there is a real articulation. Sometimes I think that college students come to believe that much of their high-school work has not helped them to a mastery of the college situation—that many of the courses which they take in college could be completed without the preliminary high-school training. The effect of such a conclusion is obviously to defeat the growth of the prejudices in favor of work and effort. This is a sort of gold-brick game that education has played too many times, and it suggests again the crying need for a penetrating study of educational values; especially in this day of the wide extension in the elective system and the growing tendency to abandon the notion that the best type of education must be articulated from start to finish. We have a serious problem here, and one that is likely to cause education no end of trouble in the near future.

I feel that so rambling a discussion as I have indulged in demands whatever justification a summary may furnish. I attempted in the first place to make clear my conception of the term "college domination." I maintained that this domination may be of two types: first, the explicit dictation of high-school policies by college authorities; and secondly, the indirect control of the high-school situation by the college through the teachers which it furnishes. I maintained that the first type of domination is not now a serious menace in the Middle West because of the disposition of college and high-school men to get together in conferences and work out the problems, each recognizing the ideals of the other. I maintained that some measure of value attaches to the wise prescription of college-entrance requirements in that it furnishes a check or control upon the local demands which may be made upon the high school, and which should of course be the primary consideration in constructing the curric-

ulum. I maintained that the second type of college domination is a serious menace to secondary-school education and that this domination will continue so long as the factor of professional training is neglected in the preparation of secondary-school teachers. I maintained that motivation, from the point of view of increasing the instrumental value of habits and knowledge, is important, but that it also has its limitations, and that the field for motivation lies in the mastery of complicated habits and involved types of knowledge where the instincts of repetition and curiosity no longer operate effectively. I maintained that proper motivation in these phases of education will help not only in the specific mastery of habits and knowledge but also in engendering in the pupils effective ideals of effort and persistence by demonstrating to them the essential worth of these virtues. I maintained finally that entrance requirements may profitably function as motives, but that they should be subsidiary and not primary motives, and that the aim of both teacher and pupil in the high school should be primarily to realize the intrinsic values which the subject-matter possesses.

THE RELATION OF THE MOVEMENT FOR VOCATIONAL AND INDUSTRIAL TRAINING TO THE SECONDARY SCHOOLS [1]

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The movement for vocational and industrial education is sociological because it is an attempt on the part of society at large to bring educational ideals into harmony with present social and industrial conditions, and it is pedagogical because it represents the conscious efforts of school men to bring about a closer agreement between educational practices and the theories set forth by the science of education.

Too frequently our acceptance of the doctrine of the value of the concrete has become a mere abstraction. We have been so busy stating principles that we have failed to provide in any adequate way for the practice, which indeed seems to be far more difficult, certainly is more expensive, and at the present stage is much more important. Of the six hundred school systems in the United States having manual training, three hundred give less than an hour a week to it, and only thirty-seven devote as much as half an hour a day to the subject. When one remembers the volumes which have been written enlarging on the vast and beneficent educational and industrial results which the introduction of hand-work into the schools was to accomplish, one can comprehend why disappointment has been so frequently expressed regarding the results.

But we agree that there is now a movement, and a very general movement, for a more adequate application of accepted principle. Like all great movements, it has been slow in getting under way, and, as a result, there has been considerable uncertainty in the minds of all regarding its direction, meaning, and purpose. Gradually, however, it is becoming clear that it means

[1] Read at the Conference of Academies and Secondary Schools in Relations with the University of Chicago, November 12, 1910.

an effort to secure equal or proportional representation of all vocations in our courses of study, instead of emphasizing unduly the school subjects which lead more especially to professional training.

The United States Commissioner of Education says:

> The Bureau of Education will lend its aid to any earnest endeavor looking toward fixing the content of meaning which the comparatively new term *industrial education* is to have in American educational terminology. A wide variance of usage of the term now prevails. Some would give it the broader meaning and make it include every form of instruction that pertains in any way to training for the industries. On the other hand, there are those who would limit its meaning to specific vocational training for industrial pursuits.

I should define vocational training as that training which seeks to create vocational interest, to develop intelligent appreciation of the social bearings of some particular kind of work or occupation, and to provide some opportunity for participation in the actual processes of that occupation. Vocational training is the general term, including professional training, commercial training, agricultural training, training in household economics, and industrial training.

Thus *industrial* education means the complete and appropriate education of the industrial worker. It means a training which is definitely planned to create industrial interest, to develop industrial intelligence and a measure of technical skill through all practicable means, including an opportunity for some actual practice in the processes employed in a particular trade or group of industries.

I am convinced that the greatest need of today is for the appropriate education of those who are to enter the lower or intermediate grades of industrial work. An appropriate education will not simply fit them for this work, but will so equip them that they may eventually pass through it to a grade higher —always with the possibility and hope of progress. Since these lower grades of work are largely filled by the children who leave school at or near the fourteenth year, the problem is one primarily, though not entirely, for the elementary schools, or

possibly for new and special schools for children now in the elementary or lower high-school grades.

This raises the question as to whether industrial education is to be given by the regular schools, or by special, separate schools.

It should be stated that some of the most eminent authorities in the country have advocated the separate institution. President-emeritus Eliot of Harvard University, in an address before the National Society for the Promotion of Industrial Education, said:

> Industrial education ought to mean trade schools, and nothing but trade schools; that is, schools directed primarily and expressly to the preparation of young men and women for trades. . . . . Since they would be new schools, distinct from the existing public schools, they necessarily involve additional cost; but, moreover, they involve new educational requirements on the part of society, requirements to a later age than we have been accustomed to.

The Committee of Ten of the National Society for the Promotion of Industrial Education reported the following definitions:

> The term *industrial education* should be used to mean training for the intelligent practice of any trade, including, of course, agriculture. It includes training in all the processes of a trade and in the theoretical foundations of that trade. It is intended to develop both industrial intelligence and skill in the particular vocation. It does not properly begin until the pupil is at least fourteen years old.
>
> *Industrial schools* are those established with the purpose of training boys and girls, men and women, in industrial efficiency by means of industrial education. The purpose of such a school is therefore not general education, but specialized education. . . . . An industrial school lays such a foundation in the essentials of a trade and the whole of it that, with subsequent practice and experience in his employer's trade, the pupil may quickly become a skilled workman. . . . . The school gives not only such acquaintance with the methods, tools, and materials which enter into the trade as will enable the student to do his work with a certain degree of facility, but it inculcates efficiency and workmanlike methods, careful habits, intelligent planning, and economy and care in the use of important materials and tools. . . . . Under such a conception industrial schools are not a part of existing public schools, but a supplement to them, meeting a need which has arisen since the beginning of the last century with the evolution of the world's history and commerce.

The former Industrial Commission of the State of Massachusetts was definitely committed to the policy of the separate industrial school, and it did much to fix opinions on this question throughout the country. The divided responsibility and the natural jealousy of the two educational boards, the long-established State Board of Education and the new Industrial Commission, resulted in the enactment of laws providing that the industrial schools, the wards of the Industrial Commission, must be separate and independent schools in order to receive the state subsidy.

Since the two boards have been superseded by a single commission, however, the tendency has been to concentrate rather than to divide the responsibility for the management of the educational work of the cities and towns, and even to provide for actual affiliation of the new industrial schools with the existing public schools. The local school boards are often made the agents of the state, directing alike the old and the new work.

If the definitions of the Committee of Ten and the original policy of the State of Massachusetts should gain common acceptance, the movement for industrial education would make slight demands upon the existing secondary schools. In fact it would probably relieve them from some of the relatively unprofitable work they are now doing with those for whom the traditional training is a misfit.

But this policy of absolute separation shows signs of breaking down, even in Massachusetts, and it has been insisted upon in no other state. Sufficient assurance of vocational emphasis will be secured by the now common practice of appointing advisory boards composed of representatives of the industry, both employers and workmen. I venture to predict that, involving as it does the training of the majority of our children for the crucial years from twelve to sixteen, industrial education is now and will permanently remain the business of the public schools.

It has been intimated that industrial education is primarily a problem for the elementary schools. There is, however, one important question affecting the matter, namely, "What is the

basis of differentiation between the elementary and the secondary school?"

If the basis recently adopted by the State of New York should become the commonly accepted one, a tremendous task would confront the secondary school. In fact the problem in that event will be shifted from the elementary to the secondary school. The policy of the state, as indicated by the syllabus recently issued, seems to be founded on those overworked but underapplied educational theories to which reference has been made. Briefly stated they are as follows:

Education should be adapted to the individual needs of the pupil. These needs vary greatly with different children, and with children in different classes of society. While the word "classes" is hateful to an American it is more equitable to recognize this truth than to ignore it. These differences in present opportunity and probable future needs become peculiarly apparent to the child and his parents at about his twelfth year, as roughly marking the beginning of adolescence. Up to this time the education of all children may be conducted on approximately the same lines, but at this time the child commonly differentiates himself, and at this time we should provide for the differentiation of his education. In the words of a member of the State Education Department:

> The distinction at present is purely formal and fortuitous and is evidently made at too late a period. Whatever may be the arbitrary and external organization of education, the actual secondary stage in the development of boys and girls will inevitably begin when the *differences* in their tastes, capacities, and ambitions become more conspicuous and important than their likenesses. The difference between elementary and secondary development is thus a matter of life, not a mere matter of convenient arrangement.

In most schools today the manual-training work of the boys and girls is differentiated in the upper grades of the elementary schools. In some cities special preparatory schools or classes are open to boys and girls at twelve years of age when it has been decided that they are to go to college. What New York State proposes is that differentiation shall be possible for all at

the end of the sixth grade. In the syllabus issued this summer is the following statement:

> In determining the work of the elementary schools, a six-year course has been prepared. The course is general in character and adapted to *all* children until that period of their development when they manifest different interests, mental powers, and tastes, which is usually at the age of twelve.
>
> This six-year course is followed by an intermediate course of two years covering the usual seventh and eighth grades and rounding out the elementary course. In this two-year course the work begins to differentiate. Work is planned which leads to the long-established high-school courses, to commercial courses, and to industrial courses. Certain work previously done in the high-school course has been brought down into this two-year course to economize the pupils' time, to reduce the pressure and strain under which high-school students have labored during their first years in high school, and to interest pupils in work which will induce them to remain in school for a greater number of years.

Ideal as this plan may be, it will be years before it will be widely adopted. Meanwhile the needs of the majority of our children will be as great and as little cared for as now unless the schools, especially the secondary schools, adopt a more sympathetic and a more democratic attitude toward those who cannot plan to spend more than one or two years in the high school. We should be the more ready to assume this attitude when we see the rapid increase in high-school enrolment and realize the sacrifice which frequently is being made to enable the child to stay in school and the apparent futility of the sacrifice in scores of cases because the existing work is so ill adapted to the capacity and probable needs of the children.

Given the willingness of the secondary schools to serve these children, *how* can the service be rendered? It seems to me that we must provide not simply shorter courses, diluted courses, but courses with greater diversity of purpose. These courses must be administered with as clear an understanding of their import and with as great a respect for the seriousness and value of the work as those which lead to higher institutions of learning. Especially is it important to study the methods which have proved effective in industrial schools, in some cases with children who were failures when judged by the standards of the traditional schools.

The principles underlying the methods employed in these schools are:

1) The vocational idea is made paramount.

2) The courses of study are so arranged that the subject-matter is clearly related to the vocation, or group of vocations, for which the school is preparing its pupils.

3) This subject-matter is such that it would be of immediate, practical value to the pupil should he be forced to discontinue his school attendance at any time.

4) This subject-matter is arranged with less regard to logical progression or preparation for some future training than to the immediate demands of the practical or vocational work in hand.

5) This work is real work in which the pupil actually participates. Articles are frequently made for the use of the school department or other city institutions, and sometimes for sale in the open market.

6) The standards of attainment are those of the outside world; results are measured by the actual excellence of the finished work, and by the money value of the time and the material consumed in its production.

7) Conditions of work are made to conform as closely as is possible and desirable to actual shop conditions. Practice varies, but the tendency is toward a seven- or eight-hour day, with the school in session for the entire year, with only brief vacations.

8) Textbooks are sparingly used, most texts being worked out by the teacher under the actual conditions of the particular school.

9) Preference on the teaching force is given to men and women who have had practical shop or commercial experience, this experience, in fact, being considered by some to be even more essential than traditional schooling. This, it will be noted, is exactly the opposite of the principle which has governed the selection of manual-training teachers for the past twenty years.

10) These schools are largely controlled or at least influenced by advisory boards composed of merchants, manu-

facturers, and workmen, men who know more about commerce and industry than about educational institutions and practices.

Perhaps the best way to gain an appreciation of these principles is to examine briefly the practices of two practical vocational high schools. I have chosen the Cleveland Technical High School and the Boston High School of Commerce.

The Cleveland Technical High School is open only to graduates of the elementary schools. It aims to give a training which will fit its pupils for the higher grades of industrial work or for industrial leadership. Courses are offered in cabinet-making, pattern-making, foundry practice, machine-shop practice, architectural and machine draughting, printing and bookbinding, pottery, dressmaking, millinery, catering and cooking.

There is a four-year course, relatively strong in English, mathematics, and science throughout, the science being that pertaining to the particular vocation.

Mathematics is at first "shop mathematics," with emphasis on the simple handling of numbers. Later arithmetic, algebra, geometry, and trigonometry are taught as one subject, and largely only where applicable to the technical work.

The geography, history, and English also relate to the industry. Shop visits are made the basis of written work, and stories of invention and industrial discovery and evolution are read.

While the technical work is at first more or less general in character, during the last two years a pupil may devote twenty-five hours a week to particular trade training. This, however, is optional.

The school is in session forty-eight weeks a year, that is, four quarters of twelve weeks each, with a vacation of one week between quarters. Twelve quarters are required for graduation.

The course of study of the Boston High School of Commerce provides the general group of studies usually pursued in high schools, except ancient languages, but these subjects are all taught with the constant view of preparing the pupils to use them in business life. In addition two or more of the following sub-

jects are taken by all pupils: bookkeeping, accounting, typewriting, stenography, drawing, commercial design, chemistry, and auditing.

From ten to twenty lectures are given by laymen on each of the following topics: advertising, salesmanship, business organization, business survey of New England, economic resources of the United States.

One unique feature of the school is a special postgraduate course (fifth year), organized on a co-operative part-time basis, the boys working in the school in the morning and for their employers down-town in the afternoon. This course offers the following subjects: money and banking, corporation finance, transportation, labor problems, business organization, accounting, modern languages, industrial chemistry, and English.

The school is in session six hours a day, and the new building, now in the hands of the architects, will be located in the business district.[2]

A thorough examination of the plans of several other typical industrial schools would be even more suggestive of possible modifications in our traditional high schools, but we have time for generalizations only.

There are three rather distinct types of public industrial schools, differing from each other in one or more important particulars. These are the part-time co-operative school, the new type vocational high school, and the new type secondary school.

The part-time co-operative plan is an arrangement whereby the public school provides the book work and the co-operating manufacturer or group of manufacturers provides the facilities for shop practice, including the services of the shop teacher, and pays the boy for his time.

This plan has many advantages, but two serious defects. It has the unqualified condemnation of organized labor, and it serves only the most able boys, since the manufacturer reserves the right to dismiss any boy after a short trial period. This is not consistent with the present conception of the duty of the

[2] The plan of summer apprenticeship which has been developed in this school was described in the *School Review* for January, 1911, pp. 34–41.

public schools, and it does relatively little toward the solution of the problem of unskill and employment. A modification of this plan, to which there seems to be no objection, results in the furnishing of instruction by the public school to boys and girls already at work who can devote a part of each day to study. This also involves the co-operation of the employer. Undoubtedly the co-operative plan will be improved and extended and widely used.

Three different grades of this type of school are well illustrated by the Cincinnati, Fitchburg, and Beverly experiments. The first is conducted by the University of Cincinnati, the second by the regular public high school of Fitchburg, Massachusetts, and the third by the elementary school of Beverly, Massachusetts.

The new type of high school admits boys and girls only on graduation from an elementary school, and furnishes both the technical vocational work and the related book work, giving all instruction within its own walls and by its own teaching force. This new type of high school differs from the old manual-training high school in that it aims to fit its pupils directly for their life-work and not for a higher technical school. Excellent illustrations of this type of school are the Technical High School of Cleveland, the Lane Technical High School of Chicago, and the High School of Commerce of Boston.

The new type of secondary school is of secondary grade only in accordance with the idea suggested by the New York State Education Department's plan discussed above. It admits boys and girls of fourteen years of age, and in some instances even younger. While it is desired that the pupil shall have passed the sixth grade, failure to have done so is not an absolute barrier. Age, necessity, and ability to work are the prime requisites. Illustrations of this type of school are the Secondary Industrial School of Columbus, Georgia, the Factory School of Rochester, New York, the Independent Industrial School of Newton, Massachusetts, the Trade School for Girls and the Pre-Apprentice School of Printing and Bookbinding, of Boston. The Secondary Industrial School of Columbus was the first

school of its kind in the United States to be established as a part of the public-school system and supported by public funds.

A description of what has already been accomplished in this field of education throughout the United States may be had from two recent reports, that of the Committee of the National Education Association on the Place of Industries in Public Education, and *Bulletin No. 11* of the National Society for the Promotion of Industrial Education, a descriptive list of existing industrial schools.

These reports give descriptions of isolated and unrelated experiments in many cities. To my mind an even more significant report is that of the Superintendent of Schools of Boston, which contains an account of a complete scheme of a single school system. The plan is probably the most complete in the country. Experiments are well under way illustrative of every grade of school. This full discussion of vocational and industrial training, together with the briefer treatment of the same subjects in the superintendent's reports for 1908 and 1909, shows the evolution of a comprehensive plan and clearly indicates the place which vocational training should have in the public-school system of a large city.

And after all it is precisely at this point that we are to find the most vital relation of the movement for vocational training to the work of the secondary schools, namely, in the influence of the secondary schools on the entire school system. Too long has the policy of the lower school been fixed by the demands of the higher, with the result that the training received in the lower is of greatest value to those who can go on to the higher or the highest. Vocational education will require such a reorganization of school systems that equally appropriate training will be provided for the 83 per cent of the pupils who conclude their school life before the seventeenth year.

WHAT THE UNIVERSITY EXPECTS OF HIGH-SCHOOL STUDENTS IN ENGLISH[1]

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I do not think anybody would deny that the English work which is offered to us at the University and elsewhere is somewhat unfortunately joined so far as credit is concerned; that is to say, a student does work in composition and in literature, and however we try, and we all do try, to make those two correlate very closely, it follows unavoidably that they do not always correlate, and the work that a student does in composition and the work he does in literature are two fairly distinct things. I will regard them as so divided in considering what it seems to the department at the University we have a right to expect. And first let me speak of literature, not because it is either less or more important but because our ideas in regard to it are perhaps less likely to be agreed than are our expectations in English composition.

I had this conference in mind when I drew up the examination for the Seniors in the various high schools who were competing for a prize yesterday, and I tried to make the examination fair to the Seniors of the high schools while at the same time I made it, as far as literature was concerned, reasonably expressive of our point of view here concerning what a student ought to be able to get out of his high-school course in literature. If you will allow me I will read that examination and then use it as a kind of text for my remarks:

A. LITERATURE

I. *a*) Why did the people of Pope's day think little of Shakespeare? Why has Shakespeare come into favor again since then?

b) State what you know of the sources of any one of Shakespeare's plays.

[1] Read at the English Departmental Conference of Academies and Secondary Schools in Relations with the University of Chicago, November 12, 1910.

II. What interests you when you read a novel? Illustrate, citing at least five novels.

III. Name two English poets of the seventeenth, three of the eighteenth, and four of the nineteenth century. Name one work of each.

IV. State very briefly the substance of either one of the *Idylls of the King*, or one of Milton's shorter poems, or of a long poem of any other poet except Shakespeare.

B. COMPOSITION

I. What do you understand by "organization" in composition?

Write an outline for a composition of about 600 words on the general topic of "what one should expect to get from a high-school education that will be of value to him in life."

II. Write two short papers of one hundred to one hundred and fifty words on your chief interest in school work and your chief interest outside.

Now what I had in mind when I framed that examination was this. In the first place, I speak for my department as a whole, though of course not for every individual member of the department, as far as I know, but I think I speak for many more than my own department here at the University as a whole—I think I speak for a good many people who are teaching college English, when I say, that so far as literature is concerned, if when a man or woman comes up here he has learned to read intelligently, and has some general idea of the substance of a certain very few important things, such as for example some general idea of the form of a play as it differs from that of a novel, some general idea of how the reading of poetry differentiates itself emotionally from the reading of prose, and some general idea of the substance of certain two or three or more—it makes no special difference—poems and pieces of prose which he can use as landmarks, more or less as nuclei around which his general knowledge of a period can cluster—if he has that, and if he has in addition to that as clear a knowledge, say, of the history of English literature in its relation to its own time as, let us say by way of illustration, he has of ancient history in general, if he has taken a course in that—if he has those three things, we do not care at all

what he has or has not read. He may have confined himself to Chaucer almost exclusively, he may have read nothing but Chaucer and *Silas Marner;* he may have confined himself to the nineteenth century; he may have read ten novels and one play, or ten plays and one novel; he may have done, in short, what he pleased, or rather what his instructor pleased. If he is able when he comes up to read intelligently, if he has a general idea of the history of English literature in relation to its time, and if he knows the difference between the structure of a novel and a play, and how a long poem differs from a short poem, and how to read poetry, we do not care whether he is able to give the meaning of a single obsolete work in any one of Shakespeare's plays, whether he can characterize Lady Macbeth, whether he knows the story of *Silas Marner,* whether he has read this or that or the other thing, what he has read or how much he has read. We are perfectly willing to leave all that to his instructor. That I think is our position.

Now I have conformed to the position of the secondary schools in this examination by asking one or two definite questions. For instance, I have put in the *Idylls of the King* because a good many students have read them. Again, I have put in the question on the sources of Shakespeare's plays, because they are a matter of curiosity to a great many students and are discussed by many instructors. But the questions that represent our own attitude are in general the other questions, the questions intended to show whether the student knows the difference of spirit at different epochs in the history of English. We want to know whether, when he reads, anything *definite* interests him; whether all he says is that "the plot interested me, and the wealth of characterization," or whether he knows specifically, as you and I know when we read a novel, what *particular* points interest. We want to know whether he remembers general history sufficiently—and no more than sufficiently—to be able to place in their proper positions a few of the great men of their time in English literature. And notice that question: two of the seventeenth, three of the eighteenth, four of the nineteenth century; it does not go back of the seventeenth century,

and it increases its demand as it comes on down toward the present time: which again is not meant to be final in any way, but indicative. I will venture to say again that further than that we do not go—we do not care whether the student has ever studied the "Speech on Conciliation" or not; we do not care, speaking generally, whether he has followed out the prescribed course of reading in one high school or another. We are willing to leave that entirely in the hands of the instructor, provided only that these very simple things be present. And they are simple, as you will admit, because we do not demand that the student burden his memory, as far as literature is concerned, with any but the largest and most important facts. We do not care whether he remembers the detail, or whether he ever had it. I think if the examination is read and if I make myself clear I may perhaps consider that matter for the moment closed. I fear that I shall be attacked on all sides, but I shall consider it closed for the moment, and pass on to what we require in composition.

We feel that we have a right to ask a reasonable understanding of the structure of the sentence. We do not feel that we have any right to expect the Freshman to write with entire grammatical accuracy. We do not fail a student for his use of hanging participles or split infinitives. Personally I do not even correct split infinitives in English 1—there is too much to do to bother about a thing of that sort. We do not fail a student because he makes occasionally those grammatical errors which one finds so properly anathematized in the textbooks. But we demand that a student should be able to recognize these errors when they are pointed out to him.

Now, for example, here is a type of sentence which we feel we cannot accept from students in the high school:

> A salesman must never argue with a customer. He must always allow anything said by a customer to pass, but if something is said about a certain fashion seen in another store, that it is more up to date, or that it is better goods for less money, it is then for the salesman to use all the psychology which has come to him naturally and to use all his mental power gracefully and scientifically until he has completely knocked that notion out of the customer's head.

That is a sentence which we regard as much more unsound and unsafe than this, for example: "Going around the corner a post hit the horse which caused him to shy." I would pass a man who occasionally wrote such a sentence as this last, but never one who wrote such a sentence as the long one above, from which it is almost impossible to extract the meaning. If what the Freshman writes is gracefully phrased, so much the better—and we now and then get graceful phrasing. If it is clumsily phrased, so much the worse. But we do not fail a man if one can gather from his work with any precision what he means.

In the second place we demand from the student a certain ability to organize his ideas. My examination goes on, (1) What do you understand by organization? We consider that a student is not able to take English 1 if he is not able to see any reason for beginning a composition at one point rather than at another.

And, third, we feel that we have a right to ask for some understanding of coherence or transition, or call it what you please, in accordance with which a man in reading another's work is able to pass from sentence to sentence and from paragraph to paragraph without too great a jar.

The standard I presented yesterday is this: by the time a man leaves English 1 he must be able to express himself with sufficient clearness, intelligence, and accuracy in his other courses to do himself justice in those courses, and in what he says fairly to represent what he wants to say. That we should demand entire grammatical accuracy, or more than a narrow vocabulary, or such a background of cultural tradition as enables one to write with emotional fervor and delight, is of course immensely far from our idea.

That is what we demand in composition, and what we feel—perhaps you think arbitrarily—that we have a right to demand.

The way of combining these things we leave entirely to the instructor. If one wants to learn how to organize his ideas, many instructors feel that he cannot do better than study Burke's "Speech on Conciliation." If the teacher thinks so, well; we

will examine the student on organization, but we do not care how much he knows about the contents of the speech itself.

Do not imagine for a moment that I am belittling literature as such, and that I am trying to throw the emphasis on composition exclusively, to the excision of literature. The instructor knows how far the class is able to go emotionally in the appreciation of literature. He may teach one class with emphasis on the facts, or on the meaning of particular words, another with emphasis on the source of the novel or drama, another with emphasis on its individual characters. But we shall not examine the student on any one of those three things. When a student reads a novel today, does he know what he is interested in, and —this is what we should like, although we too seldom get it— does he still, after his training in high school, retain any interest in literature, in reading at all? So far as we are concerned, you may teach what you please in literature, within a very wide range. Those of you who send students East to college must teach certain things. But most of you send your students to college in the West, and there they are not examined on the particular literature which they have studied. We take your word that whatever you have asked them they have done satisfactorily. Only, we occupy the same position in the University that you occupy in the high schools, and for that reason we have to maintain a perfectly definite standard. If we allow a pupil to pass through our required courses who cannot write intelligently and efficiently, then we hear from it, and that hearing we are anxious to obviate.

In this connection I should like to add—because some of you may not know it, and your students may have difficulty about it —a few words on our methods of handling in English composition students who come up here. They come accredited to the University, and that accreditment we accept, but during the first week we test them constantly in and out of class, to see how efficient they are in composition. In accordance with their efficiency, we divide them into sections, some of which we call English 0 and some English 1, and in those sections they gain further practice. In English 0 they are trained in what we

regard as more elementary matters than those which they take up in English 1, and if they show in those sections the same standard of efficiency which we require of students who are to pass from English 1, then we give them the same credit as those in English 1. That a man is put into English 0 means that he probably will not get credit for English 1, but not necessarily so. Into English 2, the next quarter, go the better students of English 0 and the poorer students of English 1. There they meet and complete their credit for English 1.

In brief, then, all we ask of the student when he comes up, so far as literature is concerned, is that he should be able to read intelligently, and that he should know about as much of English literature in relation to its time as he may be expected to remember of ancient history; in composition, that he should be able to make his meaning clear with some precision; whether clumsily or gracefully, we do not hold you responsible.

We have no way of testing the number from whom we get this power and knowledge in literature. About 4 per cent of the students who enter Freshman English composition we give credit to at once, on the basis of their obviously excellent training. On the other hand, perhaps 20 per cent are so inefficient in English that they do not complete it in one quarter. About 13 per cent are put into English 0, and so take two quarters or even more for the completion of their first major in English, and fully 7 per cent of these who continue in English 1 are nevertheless failed or conditioned at the end of the first quarter.

A VISIT TO THE FRANKFORT *MUSTERSCHULE*[1]

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I was fortunate in being allowed to visit the *Musterschule,* a *Realgymnasium* at Frankfurt am Main, when I arrived there in the early part of September, 1910, without going through the endless amount of red tape usually necessary to secure official permission. I had only two days to visit the school and attended ten classes in that time, giving my time in the order of amount to French, English, German, and Latin. Perhaps by taking up the French first I can give a better idea of continuity in any subject taught in the school. French is taught in all of the nine classes of this *Realgymnasium;* beginning with the lowest class, the Sexta, the classes per week run as follows: Sexta, 6; Quinta, 6; Quarta, 6; Untertertia, 4; Obertertia, 4; Untersekunda, 3; Obersekunda, 3; Unterprima, 3; and Oberprima, 3. It is the policy of the school to have the same man carry a certain class through the *Gymnasium;* a man starts a class in French in Sexta—he carries the work through Quinta, Quarta, Untertertia, etc., through the school. The boys in any class are held accountable for work done in former classes —they are required to know just where in their course they have had a certain bit of work.

Let us begin with the work of the first class in French—Sexta. It meets six times a week, the lessons being 45 minutes in length, and is conducted this year by Dr. Lorey, a pupil of the well-known phonetician Vietor of Marburg.. He has taught in England also and has served his *Probejahr* at the *Musterschule* in 1908-9. He is a great drillmaster and exacts the closest attention in class and the greatest neatness in the writ-

[1] Read at the French and German Departmental Conference of Academies and Secondary Schools in Relations with the University of Chicago, November 12, 1910.

ten work done at home. Any inattention in class calls forth sharp reproof and any slovenliness in the written work means rewriting. The class has had French since Easter of this year. The particular lesson I heard was on "La petite souris," a little story of eight or ten lines. The boys, who are about nine years of age, were kept on the jump racing to the platform in front and speaking it from memory. The greatest care was given to pronunciation. They spoke loudly and clearly, fairly shouting in their enthusiasm. Any indistinctness usually called forth a thundering, "Open your mouth." This part of the work, besides developing the memory, really amounted to voice culture. The teacher is a trained phonetician, has a rich, strong voice himself, and is doing wonderful elocutionary work. While the boys in turn spoke their pieces as described, two or three others were required to write the story on the blackboard from memory.

Then a most careful discussion of the sounds began. The word *souris,* e.g., started a drill on voiceless *s.* All the words the pupils could think of illustrating the sound of voiceless *s* were given. Then one boy was called upon to give the rule on the pronunciation of voiceless *s.* Another was sent to the large phonetic chart on the wall and asked to analyze words phonetically, pointing out the characters that represented nasalized, voiced, and voiceless sounds. The word *viens* in *je viens* started a discussion of nasalized *ẽ*—a boy was sent to the board to write from memory all the words he knew that contained the *ẽ* of *veins*—e.g., *impossible, fin, plein, faim, soin,* etc. The word *embrasser* called forth another boy for a list of words with the nasalized *ã* sound, e.g., *embrasser, plante, champ, dent, temps, la lampe,* etc. After this careful drill in phonetics came the drill in grammar and vocabulary. I might emphasize here that in all this drill the sentence forms the basis—better still related sentences. The story was gone over carefully by question and answer; a series of questions was asked that required the answer in the subject form; another that required the object form —this was intended to teach the boys the meaning of subject and object. Then many varied questions were asked to train the ear

to a quick understanding of the spoken word. It was surprising to see with what accuracy and quickness the pupils caught the sentences.

To increase the interest in and the effectiveness of the drill the pupils were required to form questions extemporaneously on the text and to call upon any member of the class for the answer. This was like playing a game, and the boys were almost gluttonous in their eagerness to answer. There were moments for fun and amusement to interrupt the seriousness of the class recitation. The teacher reproved the boys in fun, joked with them, told them to stretch their legs, to take a deep breath, and to sit up straight, for it would be impossible to keep up the tense attention for the whole hour. Besides, the teachers at the *Musterschule* are anxious that their reform methods be not misinterpreted; they do not wish them to appear mechanical; they say they are anything but mechanical; they want everything to be just natural, interesting, practical, and they want to develop the minds of the boys in the matter of memory, imagination, and *Gemüt*. They do not want them to be slaves to the textbook and dictionary, but they want them to become strong and independent in mind. There is the best of good feeling between teacher and pupil and the whole method is an excellent illustration of the old saying, "Work while you work and play while you play."

Before the close of this first class, selections of prose and poetry learned in previous lessons were repeated from memory and striking words and phrases given at random by the instructor were given their setting by the pupils. One or two easy French songs were sung also. The knowledge of French that these boys had acquired since Easter of this year was simply surprising.

The next class in order which I visited was Direktor Walter's Quarta in French. The class has had approximately two and a half years of instruction of six hours a week, in the language. The reading that day consisted of a piece of prose which the pupils in turn had to recite from memory. Then followed a drill on vocabulary, by complete sentences, to train

ear and memory. Types of sentences like "Il faut que" and questions like "Faut-il que" were used to fix the grammar in mind. Any one point was brought out by the use of many illustrations from the present and former lessons, or the class was called upon to supply expressions from former lessons that illustrated the particular point in question. This usually proved easy, showing how well the previous lessons had been mastered. All of the drill was in French, and Dr. Walter explained after class that explanations in German were permitted only in cases where the boy's knowledge of the French idiom was not sufficient to bring out the niceties of a phrase or passage.

A man of Dr. Walter's force and personality could, of course, arouse great enthusiasm. To keep the interest and attention at a high pitch was a main object in all of the classes. For the benefit of the visiting teachers—there were four that day—he gave samples of different kinds of work the class did. This part was, of course, extemporaneous. At the end of each bit he stopped and, addressing the teachers, added any explanation of method he thought necessary. He thus made it a sort of practice class that day.

One of the main features of all the work in all of the classes is the effort made at developing the powers of observation and imagination in the pupil. The boys in this class were told to do certain things and then asked to describe minutely their actions; e.g., one boy was told to pick up a piece of paper and put it into the waste-basket. He would say in French: "I arise"; "I walk forward"; "I stoop to pick up a piece of paper"; "I put it into the waste-basket"; "I turn about and walk back to my seat"; "I sit down." The class repeated, addressing the boy thus: "You arise"; "You walk forward"; "You pick up," etc. Another boy was sent out of the room for something. He related all his actions and the class repeated as before. This sort of practice can, of course, be made as varied and complicated as the teacher wishes, and yet remain intensely practical. Association and concentration, of course, play a leading part here in the acquisition of the language.

This was called "direkte Anschauung." But Dr. Walter

said, "One must learn also to imagine things as though real, for the imaginary may be reality some day—the imagination must be developed." Following out this idea, the boys were called upon to go through the motions of taking a train for some place: one was the conductor, another the station-gate keeper; one boy even was the baggage and was lifted quickly into an imaginary baggage rack overhead. The whole thing was said and done so quickly that the piece of baggage hardly knew what was going on. He was the disturbing element in the whole process. This was called "indirekte Anschauung."

One or two boys were called up for a dialogue. The director knew that one boy had had a trip during his recent vacation. The other boy was to draw out of him his experiences. The result was a bit of natural conversation.

Then followed a varied drill on vocabulary. A boy would give words from poems and selections read and then challenge another to tell where they occurred. The pupils could give the whole phrase or sentence usually.

Lists of words and phrases and their opposites were given —anything to associate and co-ordinate. Words were taken up by classes—nouns, verbs, adverbs, adjectives—striking expressions like "ripe peach," "sweet peach," "fragrant peach," "cold water," "clear water," "fresh water," "fat boy," "lazy boy," "hungry boy," etc.

Blackboard work again constituted an important part of the work of the class. A boy would write a story on the board while the rest went on with their drill; afterward the class made the necessary corrections and discussed them. Another wrote a letter on the board; still another described a picture given him, etc.

Then there was drill on the vocabulary of these blackboard selections: synonyms were called for; a certain phrase or sentence was given in four or five different ways. Sentence drill as described before—on subject, object, e.g.—was included also.

Direktor Walter's Unterprima, the next to the highest class, showed pretty well the method used. The class, reciting three

times a week, was reading a text on the French Revolution. A certain number of pages had been assigned and the boys were called upon to speak parts in turn from memory. The rest of the class, with the exception of three or four who were sent to the board to write selections from memory, were asked to grade the recitation on (1) pronunciation, (2) delivery, (3) grammar, (4) content. The corrections were made and the boy had to repeat each correction. The work at the board was gone over as before. One difference between the work of the upper and that of the lower classes was the increasing amount of sight work introduced; e. g., in this class the director read a new selection—"neuer Stoff." The boys listened closely and then retold it and answered questions. Or a short story in German was read to be given in French immediately. Or the pupils put questions to one another for answer.

In this Unterprima we saw sight work introduced more and more to give the boys power, to teach them independence from the printed page and the dictionary—to teach them readiness. The Oberprima, the highest class, gave an illustration of what the whole method strives for and accomplishes.

During the short morning intermission, when the whole school was eating its little bite of lunch or second breakfast, the visiting teachers being supplied with sandwiches by the *Schuldiener,* Direktor Walter requested me about five minutes before the beginning of his Oberprima in French to tell his boys a little story in English on any subject I wished. He said that I was to ask the class to retell the same immediately, first in English and then in French. I had seen enough of their methods to understand how to go about my task. This was clear before I thought of anything to tell. I realized that to make it easiest for the boys I had to find a little story that could be told in cue words, for they were what the boys would be listening for. I told them the little story of the besieging and taking of the town of Rothenburg o. d. Tauber by General Tilly in the Thirty Years' War, of Tilly's anger at the resistance of the town, of the final surrender of the latter, of his threat to raze the town and hang the council for

their long opposition, of his obstinacy in spite of the pleadings of the town council, of the clever trick of one of the maidens to get him to drink of some wine pledged to his health and which made him somewhat tipsy, and of how in his gay mood he promised to spare the town on the one condition that someone present empty a certain huge vessel of wine at one draught; of how the mayor accomplished the feat, fainted, but lived thirty-seven years afterward.

The boys could not be suppressed in their eagerness to retell. They did it wonderfully well, first in English and then (as nearly as I could tell) in French also. It was pleasing to see with what neatness ideas that were rather involved were repeated. I quizzed the class also on the vocabulary of the story, asking them in what connection certain words and expressions were used.

This class was quite ready to use the language in everyday life and a year or even less time in France or an English-speaking country would make good conversationalists out of them. The class closed with the singing of "God Save the King" and "Home, Sweet Home" in honor of the English and American visitors—the class standing.

I have given, I think, a faint idea of the general nature of the work done in French at the *Musterschule*. I should like to add a word of interest perhaps about an English and a Latin class which I visited also, which will throw additional light upon the methods pursued at the school.

The English class was the Untersekunda. This first-year class in English was reading the story of the Voyage of the Mayflower. There was discussion and paraphrasing of the text in English. Sentences were recast in three or four different ways. The work, I should say, was quite satisfactory, but the professor explained after class that he had not made adequate preparation for his lesson owing to a sick headache that had kept him awake all night. This showed that the instructor prepares his lessons carefully so that in his classroom the work may be conducted most effectively.

This lesson on the Voyage of the Mayflower brought up also

the subject of the Church of England, the Calvinistic movement, and other related topics. It was the aim of the teacher to get at the spirit of the time that brought about the voyage, its historical setting and religious significance, rather than to have the boys learn only a few new words and bare facts.

In the Latin class I saw the best example of the fun that is introduced into all classes to interrupt the seriousness of the work. Professor Bernhard was conducting his Untersekunda in Caesar. It was drill, drill, drill. It seemed that about a third of the class were former pupils of other *Gymnasia,* and when one of these boys failed in his recitation the teacher asked all who came from these other schools to rise, and then he explained that they were the ones who made life a burden to him, that they were casting reflections upon his work—hinting, of course, at the poor preparation they had had at the other schools. Another boy made a star recitation. A sentence in colloquial German was given which in Latin was an illustration of a very difficult construction and a volunteer was called for. One boy sprang to his feet and reeled it off with wonderful accuracy. The teacher called him up, shook his hand, patted him on the back, and shouted, "Good for you! [in German, of course]. That's a teacher's reward for his efforts; that's what brings glad moments into his life."

Another boy missed a question. Jokingly he was asked where he had had his oyster supper the night before. The boy laughed, the teacher laughed. In the vocabulary drill the adjective *conditus* came up. Related words were called for. The word *Konditor* was given. Turning to a boy named Cohn the professor said, "I suppose you think it comes from *Cohn* and *ditor,* but oh no!" Then suddenly everybody was asked to raise one leg, then both.

Professor Bernhard could joke with the boys in this way, because he could also be most serious.

Of course, this sort of thing illustrated clearly how much of the success of the methods of the schools depends upon the personality of the teachers. Professor Bernhard is a combination of the stern, strong type of man, and the kind,

gentle type. Let another man imitate him and he will most likely fail. A passage in the Caesar lesson spoke of the moral purity of the German-barbarian youth, and by comparison Professor Bernhard spoke of the wickedness with which, alas, too many of the modern youth were acquainted. He treated what we in our false modesty would call a delicate subject, with a directness, frankness, naturalness, and simplicity that was impressive, drawing from it a valuable moral lesson for these Frankfort youths, which all young people should know. It was the best treatment of a thing of this nature that I have ever seen, and it showed the big personality of the man.

In conclusion, I should like to recount briefly a few of the striking features of the work conducted at the *Musterschule,* a few of the things that even one visit to a single class brings to one's notice strikingly.

1. The teachers are well trained and thoroughly equipped. All of the regular teachers except the teachers of gymnastics, drawing, and like subjects have the degree of Doctor of Philosophy. About ten out of fifteen of these have the title of professor. I have cited the example of Mr. Lorey who was a student of phonetics under Vietor, has spent some time teaching in England, has served his *Probejahr* at the *Musterschule,* and has a been a regular teacher for only about a year, although I should say he is a man over thirty years of age.

2. Being a well-trained man, the teacher at the *Musterschule* maps out his work carefully and logically. He works on a single definite point or principle at a time; he explains to his pupils just what he is going to undertake, just what he wants them to do, what he wishes them to accomplish next. He has prepared himself to present his task clearly; the pupil sees what the teacher is driving at; there is perfect understanding between the two.

3. One sees that patient repetition leads to mastery, repetition that gives the pupil ample opportunity of using in a practical way both the principles of grammar and the vocabulary; furthermore, repetition intended to develop the boy's powers of thinking and observation.

4. Absolute attention in class is demanded. Work stops the moment there is any inattention.

5. The teacher is enthusiastic and versatile, but he does not allow his versatility to scatter his strength and effort at random over the whole field of his subject, which would lead only to confusion and vagueness.

6. It is very evident that this concentration of effort yields wonderful results.

7. The boys are doing more than learning a lot of facts. They learn to co-ordinate the knowledge they gain in their lessons from day to day, from year to year, so that their store of learning becomes of practical use to them. The Mayflower lesson referred to above will illustrate what I mean. The pupils are taught to understand the character of the people whose language they are learning.

Lastly, the enthusiasm displayed by the boys in all of the classes is wonderful; the class work runs on like a well-oiled machine. Above all it appears clearly that early youth is the best time for the learning of a foreign language.

I have reported on a school where conditions for instruction not only in the modern languages, but in all branches, are ideal. The school stands for most modern, progressive methods in education. To be sure, the conditions I have described are those suited to the German youth. Naturally we must not expect that they would be entirely suitable for our American youth. Yet they cannot fail to invite comparison with conditions existing in our American schools. In America the modern languages have not yet obtained equal recognition with other subjects. Consequently the teaching efficiency in them is not nearly so great. In the *Musterschule* each man is a trained specialist in his subjects. In our high schools too often French and German are treated as left-over courses to be taught by those teachers whose programs are least heavily overburdened. The courses being elementary, the mistaken notion too often prevails that anybody can teach them anyway. Is it surprising, then, that there is lack of interest for the subject on the part of the pupils and lack of efficiency on the part of the teacher?

In consideration of these things I should like, for the purpose of inviting discussion, to put the following questions:

1. What can be done to impress upon boards of education and teachers themselves the need of greater recognition of these languages in the high school, and also the need of greater efficiency in the teaching of them? One argument would be that the high-school age of the boy and girl is a far better time for acquiring the elements of a new language than the college age.

2. How can this greater efficiency be attained? Should not every teacher of any modern foreign language possess, in addition to a sound knowledge of the grammar of that language, an excellent pronunciation, a good appreciation of the spirit of the language and the people that speak it, and sufficient fluency in conversation to enable him to give that varied drill that leads the pupil to independence from the printed page and the dictionary and gives him a real, exact, and handy knowledge?

Should not school boards exact these things from teachers and in return raise their salaries and the dignity of their positions, placing them certainly on an equal footing with the Latin teachers?

SOME NEW MODIFICATIONS OF OLD EXPERIMENTS IN PHYSICS[1]

E. S. BISHOP
The School of Education, The University of Chicago

I. HOW TO OBTAIN THE BEST RESULTS FROM A TUNING FORK WHICH VIBRATES SYMPATHETICALLY WITH ANOTHER

The tuning forks are first brought into unison by sliding a piece of soft rubber tubing, about half an inch long, up or down one prong of one of the forks. The open ends of the resonators are then placed a short distance apart and each resonator is placed upon two pieces of new soft rubber tubing. If the experiment is tried first without the soft rubber tubing supports and then with them the intensity of the effect is easily seen to be several times as great in the latter case. By this method the author made audible over a large room a tuning fork of the cheapest grade used in the laboratory. For those whose hearing is somewhat impaired vibrations of the second fork may be made visible by suspending an elastic ball about a quarter of an inch in diameter with a thread four or five inches long so that it just touches the prong of the second fork. The fork in this case made the pendulum in contact with it vibrate through an amplitude of at least half an inch, which could be easily seen in all parts of the room. The function of the soft rubber tubing is to conserve the energy of the forks in themselves, thus preventing the dissipation of energy to the table which results when they rest directly upon the table.

II. A DEMONSTRATION EXPERIMENT ON ABSORPTION

Using sunlight or parallel rays from a projection lantern and a single slit of the optical disc, first place a piece of heavy plate glass, silvered on the back, in the path of the rays and

[1] Read at the Physics Departmental Conference of Academies and Secondary Schools in Relations with the University of Chicago, November 12, 1910.

obtain the multiple reflections of the beam upon the disc, as in Fig. 1. Then replace the piece of silvered plate glass with

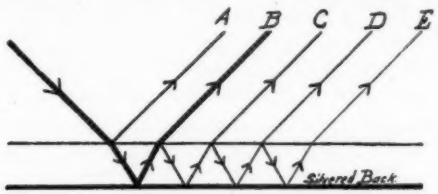

Fig. 1.

one which has been covered on the back with a mixture of lampblack and banana oil. In the second case the only reflection obtained is at the first surface, the beam which passes into the glass being so completely absorbed when it reaches the blackened surface that multiple reflection does not take place (see Fig. 2).

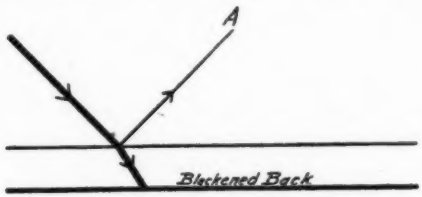

Fig. 2.

The experiment also shows that when reflection takes place from a mirror most of the light is reflected by the silvered surface, for the beam B from the back of the mirror is much more intense than the beam A or any of the multiple reflections following B.

III. A CONVENIENT METHOD OF PROJECTION

Place the electroscope or whatever is to be projected upon the screen immediately in front of the objective of the projection lantern, thus using the whole lantern as a condenser. Then place a convex lens in front of the object and move it toward the screen until the object is distinctly focused on the screen, the object and screen then being at conjugate foci. The proper

focal length of the lens will depend on the magnification desired and the distance to the screen. For most purposes a lens of focal length between twenty and thirty centimeters will be found suitable.

A glass tank of any dimensions may be placed in front of the lantern and used to contain the elements of a voltaic cell, and when the electrodes are focused on the screen it makes a very convenient method of showing such phenomena as effect of amalgamating zinc plates, formation of hydrogen at the positive electrode, etc.

The method is convenient for projecting many other experiments upon the screen.

IV. A MODIFICATION OF AN EXPERIMENT ON AIR PRESSURE

Take two glass constant-weight hydrometer tubes, fifty or sixty centimeters long, such as are used in Millikan and Gale's laboratory course, the two tubes being of the proper diameter so that one slides easily into the other. Fill the larger one with water, push the smaller one part way down into it, invert both, and the pressure of the air will force the smaller tube completely into the larger one when the whole is supported by holding the larger one in the hand or a clamp.

If the tubes fit very closely the action will take place more rapidly when gasoline is used in place of water, as the gasoline runs out between the tubes more easily.

V. A MODIFICATION OF THE CARTESIAN DIVER, OR A FAKE LUNG TESTER

Invert a small pill bottle partly filled with air (but not sufficiently to float) in a flat bottle filled with water. With the aid of a finely drawn out tube with a J on the lower end and a rubber from a pen filler on the top, force fine bubbles of air into the pill bottle until it just rises to the surface. It will then be very delicately balanced so that a small increase in pressure will cause the diver to descend. Then cork the bottle with a rubber stopper into which is inserted part way a glass tube. Attach a piece of rubber tubing to the glass tube to blow upon.

The pressure which causes the diver to descend is obtained by pressing upon the sides of the bottle. This can be done unobserved by blowing on the tube while the bottle is held in the hands. The apparatus is then given to a friend or member of the class who attempts to blow the diver down but of course fails.

If a slight pressure on the sides of the bottle fails to cause the diver to descend, force the stopper into the bottle a little with a rotary motion until the diver just starts down, and then the added pressure necessary to send it down may easily be obtained by pressing the sides of the bottle between the thumb and finger.

An outfit looking exactly like the one just described may be made to accompany it, the only difference being that the glass tube runs completely through the stopper instead of part way. This diver can then be forced down by blowing on the tube, but not by pressing on the bottle, the reverse of the other one.

The diver in the first outfit may be so delicately balanced that when forced down by pressure from the sides of the bottle it will stay at the bottom due to the pressure of the liquid above. It may then be caused to ascend by pressing lightly on the edges of the bottle, thus relieving some of the pressure due to its being corked tightly. It is very interesting to see how even a heavy flat bottle will thus have its volume diminished by a slight pressure on the flat sides and increased by a slight pressure on the edges.

VI. A LABORATORY METHOD FOR DETERMINING THE INDEX OF REFRACTION

Take a rectangular battery jar about twenty or twenty-five centimeters deep. Fasten a piece of fine white thermometer tubing, *T*, across the middle of the bottom, and paste a paper scale on the outside of the jar so that its zero end is even with the upper edge of the thermometer tubing. (See Fig. 3.) With the aid of another piece of the same kind of tubing held just outside the jar, locate by the method of parallax the image

T' of the tube in the bottom of the jar. The reading at the top of the tube outside subtracted from the depth of the water will then give the distance of the image below the surface. Call this distance i. Call the distance from the top of the tubing in the jar to the surface of water o. This is read off directly on the scale. Then the index of refraction $n = o/i$.

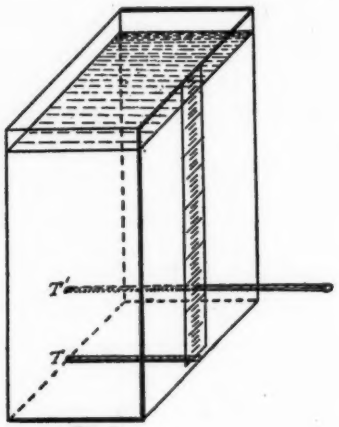

Fig 3.

The following values for the index of refraction of water were obtained from ten successive independent observations: 1.351; 1.338; 1.333; 1.338; 1.327; 1.346; 1.332; 1.339; 1.341; 1.323. Mean value of $n = 1.337$.

This experiment was suggested from the theory underlying it as found in Millikan and Gale's *First Course in Physics*, p. 411.

THE FIRST-YEAR SCIENCE COURSE IN HIGH SCHOOL.[1]

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Five years have elapsed since I was actually engaged in teaching physiography in high school, but during these years there have been several occasions upon which I have been forcibly reminded of my work in the high school and led to consider very seriously what was the real good of my teaching that subject to those young people. I have had several students come to me in the University courses whom I had taken through a year's work in physiography while they were in high school. It has been notably true that these students have not retained much of the data which had been presented in the classroom. This has not really surprised me, and I suspect that many teachers have had similar experiences in educational work. Nor has it at all discouraged me; for retaining in memory facts regarding one science or another is not of prime importance to the student entering upon his first year of scientific work. If my work in the high school was worth anything, it was in training those students with whom I came in contact in a more effective use of the scientific method of thought. The facts which I presented were but the tools in the educational process. Whenever I guided, persuaded, forced, or enticed a mind to think, to pass from one point on to another with the assurance that each new move made was correct because it rested on facts and valid deductions, I believe I did that mind some good.

All minds enjoy thinking, just as much as the athlete's

[1] Opening remarks at the Physiography and Biology Departmental Conference of Academies and Secondary Schools in Relations with the University of Chicago, November 12, 1910. The subject for discussion was, "The Relative Claims of Physiography, General Science, and General Geography for a Place in the First-Year High-School Curriculum."

muscles enjoy exercise or as our palates enjoy the sensation which comes from certain foods. The mind was made for thinking, and it enjoys that activity. The greatest danger in our educational work is that we stop the mind from thinking; we inhibit that process; we discourage it. Fully one-half of the students who come to us here at the University have almost lost the ability to think. Their mental machinery has become rusty, and it is only by the most strenuous methods that we can get that machinery into working order again. Years of mechanically learning and reciting what is in a book has discouraged thinking, has really taught the pupils not to think. This process of education has taught the young people to believe that what they may be expected to learn is in some book, that what they may be expected to do is explained in some book or will be explained to them. It has stopped all independence in the intellectual processes.

I believe, therefore, that any science course which would claim a place in the first year of the high-school curriculum should offer abundant opportunities for training young people to organize their knowledge, to acquire new facts, perfect their organization of facts in the light of new facts obtained, frame hypotheses, test these hypotheses, and ultimately come to a conclusion which is consistent with all known facts: in short, to acquire the scientific method of thought.

As little children all of us were research students. We were true investigators. Everything attracted attention, and there is no doubt that we were anxious to know about everything that we saw. That spirit of investigation is the spirit of true research, manifested in the most advanced intellectual work that the world knows of, and it is the duty of teachers in all lines of work to conserve with the greatest care that spirit of investigation. It is, furthermore, the duty of all teachers to train, in so far as they can, that instinctive desire to investigate, so that each year investigation may be carried on to a greater advantage. Some work can be taken up with young people in just that spirit of original investigation from the first day that the teacher meets the class; and I believe that any

course in science which would claim a place in the curriculum of the first year of high school should be of such a nature as to lend itself easily and happily to the preservation, training, and development of that spirit of research which is in all young people.

If the question is asked, what there is in physiography which makes it especially fitted for carrying on such educational work as I have held up as an ideal, we may answer that the facts worked with are in large part drawn from the experiences which the children have had, either in school work, in their out-of-door play, or in travel. Facts which are necessary in this work and which cannot be drawn from the experiences of the children may be readily obtained. They do not involve much technical knowledge. The reading is relatively simple. Pictures, lantern slides, drawings, museum material, simple laboratory experiments, and field excursions—all facilitate the process of gathering the necessary facts.

Again, the science is a broad one. It is not too highly specialized. The students are led from little observations which they have made to broader and broader conceptions of geologic processes which are world-wide. Such conceptions grow as contributions are received from the different members of the class, until the subject is rounded out with the unity consistent with that stage in the development of the child.

The fact that physiography as a science has been so well organized gives it a strong claim to a position in the first-year high-school curriculum. The organization of the facts by the student is easily guided by an expert teacher properly prepared in the subject-matter. The organization may not always be the same; it may not be the same in two classes at work on the same subject on the same day. The process of organizing the material, however, has the same educational advantage to the child. As the work goes on, it is clear—or at least it should be clear—to the children that they are making progress through these mental processes, through thinking, through organization of the known facts. They are gaining ground. They actually understand something which they did not for-

merly understand. This is a new way to many of them to reach desired ends.

Mr. Dewey in one of his essays emphasized the changing phases in attention which come with the normal development of the child. In very little children the attention is spontaneous, and immediate objects before them hold their attention. There is no conscious effort on the part of the child. Later the child will give attention because of some desired end or result which he wishes to attain. This phase of attention is sometimes spoken of as "voluntary." The transition to this voluntary attention comes slowly. To quote from Mr. Dewey:

> The child directs a series of individual activities on the basis of some end he wishes to reach. This end is something to be done or made or some tangible result to be reached; the problem is a practical difficulty rather than an intellectual question. But with growing power the child can conceive of the end as something to be found out, discovered, and can control his acts and images so as to help in the inquiry and solution. This is reflective attention proper.

Further on in the same article Mr. Dewey emphasizes the serious problem associated with the proper recognition of this incipient form of reflective attention, and urges most strongly the importance of taking every opportunity to train and develop this type of attention:

> A person who has gained the power of reflective attention, the power to hold problems, questions, before the mind, is in so far, intellectually speaking, educated. He has mental discipline, the power of the mind and for the mind. Without this the mind remains at the mercy of custom and external suggestions.[2]

This psychological analysis of attention has emphasized to me the importance of choosing such material for the first-year science course as will present numerous problems which the child at that stage in his development can undertake to solve, and which, furthermore, follow one after another, becoming more and more difficult, and leading to more and more significant conclusions.

I appreciate that one may select from all the sciences many

[2] *Elementary School Record*, Vol. I, No. 4 (1900), pp. 111-13.

interesting phenomena, and it is undoubtedly true that such selection provides material which in itself appeals to the child in the first year of high school as exceedingly interesting. I would raise the question whether this commands more than that childlike, spontaneous attention. Is it not using those things which, like the catastrophe or any spectacular phenomenon of nature, arouse spontaneous attention in all people? I recall a course in "general science" which was urged by a colleague of mine, which began with the study of the alarm clock which awoke the child in the morning. In a few moments the telephone bell rang, and that was the next thing to study. On the way to school, trolley cars, steam engines, automobiles were seen. Thus there was a chain of experiences which the child had each day which should form the basis of the scientific work in the first year of high school. There is an abundance of most interesting material for study suggested by just such experiences; but can such general science be made the means of attaining the highest ideals in educational work with those young people?

I appreciate also that the humanistic phases of general geography are exceedingly interesting. They are fascinating. And with the development of geography as a science it is quite possible that an elementary course may some day be selected and arranged which will prove to be exceedingly valuable for the first year in high school. But as yet general geography has not reached that stage of development. It is not a science.

In conclusion, I will therefore urge that this problem will not be solved until we understand the development of the child well enough to know what training is appropriate for each stage and know enough to select the proper material and to conduct the work in such a way as to reach the desired end. It is not a question as to which science shall be taught. The question is as to what influence we wish to produce. I have, therefore, aimed to present an educational ideal, and to indicate certain tests that may be applied whenever a new applicant for a position in the science curriculum appears.

REPORT OF THE JOINT COMMITTEE ON THE RELATIONS BETWEEN THE UNIVERSITY OF CHICAGO AND CO-OPERATING SECONDARY SCHOOLS[1]

NATHANIEL BUTLER
The University of Chicago

Preliminary to this report, being the first, I think it is pertinent to remind you that co-operation between the University and secondary schools is practically as old as the University itself, having been a part of the original scheme entertained by President Harper. The relations between the University and the schools have been promoted by (1) the annual conference, which brings to the University not only the officers but also the pupils of the co-operating secondary schools; (2) the presence of hundreds of teachers from co-operating schools in residence at the University in the Summer Quarter; (3) frequent visits of inspection by officers of the University to the secondary schools; (4) reports on the standing of graduates from co-operating high schools in residence at the University, which are sent from the office of the examiner to the respective schools; (5) the frequent participation of the University officers in school anniversaries; (6) the work of the joint committee appointed last year; (7) the special co-operation of certain secondary schools with the department of education of the

[1] Read at the Conference of Deans and Principals with members of the University, November 11, 1910.

The joint committee, which was appointed at the annual conference in November, 1909, consists of (1) representatives of the secondary schools: Principal C. P. Briggs, The High School, Rockford, Illinois; Principal E. F. Brown, Wayland Academy, Beaver Dam, Wisconsin; Superintendent J. Stanley Brown, Joliet, Illinois; Principal H. B. Loomis, The Hyde Park High School, Chicago; Superintendent H. B. Wilson, Decatur, Illinois; (2) representatives of the University: Professors C. H. Judd, C. R. Mann, F. J. Miller, H. E. Slaught, N. Butler, chairman of the committee. The President of the University and the Dean of the Faculties are members *ex officio*.

University, upon the invitation of Professor Judd, in the work of investigating the standing of students (*a*) in the secondary schools and (*b*) after entering the University, with a view to correlating more perfectly the work of students in their secondary-school and college courses.

At present there are nearly four hundred secondary schools in actual co-operation with the University of Chicago. These schools are to be found in a region extending from Pennsylvania to Texas and from Minnesota to Louisiana.

The joint committee on relations between these schools and the University has held three meetings during the year. The business of the committee may best be reported in the form of resolutions adopted at the several meetings. These resolutions have not all been embodied in University legislation. They are reported to this conference merely in order to give to this body a general view of the sort of activities which have engaged the attention of the committee:

1. *Resolved,* That it is the sense of this committee that in exceptional cases, upon the recommendation of the principal of the high school, the University should recognize a claim for advanced standing for work offered by a high-school pupil in excess of fifteen units, even though done within the regular four-year course.

2. *Resolved,* That it is the sense of this committee that the University should accept for provisional college credit, on certificate from the principal, work of the fifth and sixth years in properly manned and equipped high schools.

3. The committee voted to approve the suggestion of Mr. Judd that a study be made of the interrelations between the school and the college by a systematic study of the pupils themselves as to personal characteristics both in the school and in the subsequent college work. It was made clear that a suitable and practicable form of collecting data and tabulating results is the first absolute necessity in inaugurating this scheme; and Mr. Judd and Mr. Loomis volunteered to make a study of the situation between the Hyde Park High School and the University of Chicago, where a large number of students are usually involved, and to prepare a blank form and specific recommendations to present at the next meeting.

4. *Resolved,* That it is the sense of this committee that the present foreign language requirement for admission to the University of Chicago should be retained.

5. Inasmuch as the University expects the secondary schools to employ

only college graduates as teachers, and inasmuch as the secondary schools have been and are trying to conform thereto;

Resolved, That it is the sense of this committee that the University should provide adequate training in the history and pedagogy of the various subjects, including observation and practice teaching, and that in recommending graduates to teaching positions in the schools preference should be given to those who have availed themselves of these opportunities.

6. *Resolved,* That it is the sense of this committee that the University should co-operate with the secondary schools in establishing courses in commercial geography and industrial subjects by providing facilities for training teachers in these branches.

7. *Resolved,* That this committee suggest to the conference the importance of considering carefully the question of the present language requirement of three units other than English for admission to the University and the similar language requirement for graduation in many high schools, and that it is the intention of the committee to take this matter up for formal discussion and action; to which end suggestions are desired from the members of the conference either orally or by correspondence.

8. *Resolved,* That this committee suggest to the conference the importance of devising ways and means for recognizing by additional credit the work of any student maintaining a standing in all subjects which is exceptionally high, provided he is an exemplary student according to the combined judgment of the high-school faculty in conduct and attendance as well as in classroom work, and that it is our intention to consider the matter further; to which end we invite all possible aid from the members of the conference either by word of mouth or by correspondence.

9. In view of the foregoing resolutions and in connection with the investigations already started, it was further moved and voted that this committee request the conference to empower it to create subcommittees, not necessarily from its own number, for the purpose of considering special questions prepared from time to time by this committee, such subcommittees to meet with this committee when so requested and to co-operate with it in all possible ways.

10. It was voted to recommend to the conference of the University with officials of secondary schools that the chairman of the program committee for the annual conference be selected from this joint committee, in order that the discussions of this committee and the materials growing out of these discussions may best be utilized for the purposes of the conference.

It will be of interest to this conference to know that the University ruling bodies have modified the list of entrance requirements directly or indirectly in consequence of the influence of this committee. The modifications are as follows:

To the subjects which for many years the University has accepted for entrance credit from secondary schools there have been added advanced arithmetic, one-half unit, and commercial geography, one-half unit. From the group of drawing, shop, and domestic science, two units may be offered, though credit will be allowed for them only on the recommendation of the departmental examiners concerned. Further, whereas formerly the student might offer one-half unit either in political economy or in civics, he may now offer one-half unit in each of these; and, whereas formerly he was required to offer one-half unit of advanced algebra, he may now enter the University without offering that half-unit, although in that case the subject must be taken in college.

No doubt this conference clearly understands that the University of Chicago is entirely in sympathy with the movement to recognize as worthy of college entrance credit any subject suitable to be taught in a high school as soon as such subject is properly organized and standardized.

DISCUSSION

THE RECITATION AS A MEANS OF TRAINING IN PUBLIC SPEAKING

Is the public-speaking department as it is now organized in our high schools, with its course offered as an elective, giving satisfactory results?

It has been my observation that the pupils choosing the subject of public speaking are the ones whose tastes lead them to the choice, and that as a result pupils who are backward in expression are pushed still farther into the background as those who are working in this department become the leaders, not only in debate, extempore speech-making, and oratorical contests, but in the daily recitation as well. But, you say, if this department is accomplishing so much for its pupils, does this not bespeak greater commendation for it? It does that. The object of this paper is not to decry any good that is being done in any department, but to present existing conditions surrounding the pupils whose timidity leads them to shun the work in the public-speaking department, and to offer some suggestions to remedy the difficulty.

I have recently visited a number of high schools, and I found in all of them the same lack of freedom in expression among pupils in the daily recitation, an inability to talk at any length upon a topic of the lesson. Is it because pupils cannot learn to express themselves with ease and fluency, or is it because they have not the requisite training for these accomplishments? I am convinced that the latter is the case in far too many instances.

Let us look at prevailing methods in the ordinary high school and in many high schools of high standard. The word *method,* however, is hardly applicable to much of our high-school teaching. The elementary teachers have a great advantage over the high-school teachers, for the training schools give them a foundation at least upon which they may build method and purpose, while the high-school teachers go fresh from college into their teaching and must work out their own salvation. Perhaps after some years, if these college graduates have a professional spirit and a liking for their work, they will have evolved methods with definite purposes. But the chances are that most of them will drift from day to day with no plans and no ideals, and will never see pupil and subject in their proper relation. And this not because they are unwilling to be pedagogical, but because they are handicapped by college methods which, as they soon learn, do not fit in with high-school possibilities, and because there is no one in the school to give any helpful suggestions.

In almost every classroom there exist the following conditions: the teacher aggressively in the foreground, the activity of the class coming almost

wholly from his words or personality; pupils reciting from their seats, either in standing or sitting position; questions put by teacher with shorter or longer answers from pupils; occasional outside information read from papers by pupils standing or sitting at their seats. And many times I have known teachers to occupy period after period with a continuous talk, taking the time which should be given to their pupils for the very thing they are doing.

Our methods are seriously at fault when the teacher is continually in the foreground and the pupil in the background; when the teacher gets the training which should be given to his pupils. A skilful teacher is a guiding spirit, and will so conduct his class that his pupils more than he will grow in initiative, self-reliance, and ease of expression. More often than not he will put himself in the position of an accompanist, who assists and supports, but who does not come into the foreground of the performance.

Are there not, then, some methods on which one may rely to correct these serious defects? I believe there are, and that the elements of public speaking, so far as they teach confidence, initiative, poise, and ease of expression, may be woven into the daily recitation by methods which will give to the pupils a training they are now failing to receive and of which they stand sorely in need. A few suggestions will put a clever teacher at work upon the problem, and he can soon evolve much that will fit his own particular needs and those of his pupils.

You are teaching a classic, and you think you must be the one to present the questions; but you may be surprised to find how well a chairman appointed from the class and sitting in your place at the desk will conduct that same recitation. Give him fair warning and good time for preparation for the day's presiding; the class will lose nothing, and he will gain initiative that he would not have gained in a year of answering questions from his seat.

Most of our pupils are poor readers, and by the time they are young men and women are so far removed from the practice of oral reading that they are afraid to utter a sentence. Oral reading, with the pupil in front of the class and special attention given to standing position, inflection, and general manner, will give a training for which no amount of poured-in information will compensate.

Let outside information be brought to the class, but do not let it be read from a paper poorly organized or poorly written. Show your pupils how to make an outline and how to build material on to that outline, and then let them give their information to the class in the form of a talk. If the talk is logical, as it will be, built upon an outline, the class will have little difficulty in taking notes, as it will be given slowly and in simple, easy language. Main heads of the outline may be put on the board, as may also any difficult words that occur in the report.

Oral composition may be handled in the same way. The pupil will do best to work up his composition on a simple outline, and come out before the class to give it.

There is everything in favor of the recitation with the pupil before the class, and nothing in favor of it with the pupil at his seat. The short time it takes for a pupil to pass down the aisle to a place before his audience may easily and profitably be taken. And the satisfaction and profit will not all accrue to the pupil from this method, for the teacher need not then wear himself out in vain effort to make the pupil stand up on both feet; nor will he have continually to say, "Talk louder, please." In front of the class, the pupil is in a position to be trained for correct standing-position and for a good manner in expressing what he has to say. I have seen the most diffident boys, who had come from a country-school training, grow in ability to express themselves, until they could talk from twenty to thirty minutes upon topics especially prepared and built upon an outline.

You are studying Shakespeare? By all means let your class dramatize the play after the critical study of it has ended. The front of your room can be the stage, with the aisles as entrances. The lines need not be committed, but may be read, and a great deal of sympathetic interpretation will fall into the production. This work will be spontaneous, for the pupils delight in it.

These methods need not be confined to the English department alone. In history and in civics much the same methods may be used, and the teacher who thinks he is not having the proper recitation unless he is presenting puzzling questions to his class, day after day, should pause and ask himself the question, What qualities am I developing in my pupils that will stand the test in the years that follow?

Where shall our pupils learn poise if not in their educational training? Habits grow fixed, self-consciousness comes on apace, and by the time a pupil has reached the Senior year of the high school it is very difficult to get him on his feet before a class to give public expression to his ideas. The methods suggested in this paper should be introduced in the ninth grade and continued throughout the four-year course, so that pupils when they leave the high school may be equipped with a fair degree of self-confidence and ease in public speaking.

I do not believe that the quiz method should be wholly discarded, but it should find a proportionate place in the daily recitation. We need the analytic work, and the pupil should by all means have ample opportunity to use in full his powers of analysis; but I believe that carefully worked-out plans and purposes on the part of the teacher will settle most of the difficulties now facing us and give to our high-school pupils a better-rounded plan of self-development.

GRACE M. PACKARD

EVANSTON TOWNSHIP HIGH SCHOOL
EVANSTON, ILLINOIS

BOOK REVIEWS

Scottish Education, School and University. From Early Times to 1908. By JOHN KERR. New York: G. P. Putnam's Sons; London: Cambridge University Press, 1910. Pp. xvi+442. $2.00.

The writer who undertakes to compress successfully into a single volume the history of Scottish education as seen through its schools and universities is confronted with a serious task. His purpose should be no less to satisfy the specific desires of educators than to furnish an account interesting enough to appeal to the general reader; the thread of his narrative must be spun over seven centuries, at the least; and he needs to have spent many years both in active service in the field of education and also in tracing his theme back to its roots in mediaeval literature.

Professor Kerr, in his *Scottish Education*, has used discrimination in the emphasis laid upon different periods of his work and in the material used to develop each period. His aim was to select from available sources details that are typical of the time and locality to which they belong and to present them in an impressionist view.

The history falls conveniently into four parts, the first being an account of schools from early times to 1560, the founding of grammar schools, and the three earliest universities, St. Andrews, Glasgow, and Aberdeen. The earlier universities were modeled after the mediaeval universities of the Continent; papal authority was required to give them self-government, immunity from taxation, power of conferring degrees, and liberty to teach; they were dependent on the support given them by interested church dignitaries; they were primarily ecclesiastical and secondarily educational.

The second period embraces the 136 years between 1560 and 1696. Burgh and other schools receive treatment in a separate chapter, done with interesting detail. The emoluments of masters of these schools were meager, the principal sources of income being from church lands, endowments made by private persons, fees that were apportioned to the ability of the patron, bent silver, Candlemas offerings, and cock-money. Cock-fights took place in the schoolroom, none but scholars and gentlemen and persons of note being present. The cocks that would not fight, or that got killed in the fight, became the perquisite of the teacher. Two universities had their beginning during this period, Marischal College, founded by Earl Marischal in 1593, and Edinburgh University, of disputed date, as the development of the Town's College of Edinburgh into the famous university was a gradual process. During the period university life in all five institutions was in a state of change and unrest, due principally to no less than seven alterations between Presbytery and Episcopacy.

The education act of 1872 marks the end of the third period of the history. By this act the tenure of office for teachers of burgh and parochial schools appointed after the passage of the act was "during the pleasure of the school

board." Down to the end of the seventeenth century signature to the Confession of Faith was one of the conditions of appointment. During the eighteenth century it practically ceased to be mandatory, although there are several instances of the signature as late as 1860. Among topics of particular interest may be mentioned the S. P. C. K. schools, which had their origin in 1790 by a grant to incorporate the "Society for the Propagating of Christian Knowledge in Scotland"; the distinguished part played by David Stow in connection with the training of teachers; and the list of Scotsmen, eminent in almost every branch of academic culture, who contributed to the intellectual brilliancy of the eighteenth century.

The fourth period, which occupies about one-third of the volume, is treated with greater detail and in a more interesting manner than the earlier periods. The author has had a close and practical acquaintance with the school and university life of both Scotland and England for more than fifty years; consequently this part of the history may be considered not so much the compilation of a painstaking historian as the judicious interpretation of the progress made in the educational institutions of Scotland in recent years by one who has had no small part in their development. The appendix rises above the ordinary repository for statistical and other technical matter; it consists of short treatises, by experts, on such topics as primary schools, the system of training teachers (1905), secondary schools, the present state of technical education, and the universities.

RAYMOND MCFARLAND

MIDDLEBURY COLLEGE
MIDDLEBURY, VERMONT

Handwriting. By EDWARD L. THORNDIKE (Teachers College Record, XI, 2). New York: Columbia University Press, 1910. Pp. 93. With many charts. $0.30.

The author describes a method of testing handwriting and reports some results of the application of the method to several school systems. The object is to find a means of grading a specimen or group of specimens of writing. For this purpose a scale is constructed, consisting of samples representing regularly ascending degrees of excellence as measured by the qualities legibility, beauty, and character. The samples which represent these different degrees are selected by a group of "competent judges" from a large number of specimens of writing. In some cases two or three samples of different styles of writing are given to represent a given grade. This scale is to serve as a standard by which to set requirements for the attainment of schools, successive grades in a school, individuals, written examinations, etc., and as a standard for the comparison of different school systems or methods of teaching.

By the application of such a scale as this and by a measurement of the average speed the writing in seven school systems was examined. As a result of this examination Mr. Thorndike concludes that six of the seven school systems using various methods do not differ materially in the quality of writing produced at any particular speed. He found enormous individual variations, and announces that the rapid writers are in general also the best. From the fact that the writing of most adults is poorer than that of many children of the upper grades, the

conclusion is drawn that the school develops writing to an unnecessary degree of refinement. No correlation was found between excellence of writing and intellectual ability in adult women students.

FRANK N. FREEMAN

THE UNIVERSITY OF CHICAGO

Practical Algebra. First-Year Course. By JOS. V. COLLINS. New York: American Book Co., 1910. Pp. 301. $0.85.

Professor Collins presents in his recent text, *Practical Algebra*, a book which will be appreciated by the progressive teacher of the subject. He has retained enough of the traditional theoretical course to make the development of the subject logically sound, and yet he has incorporated enough of the modern methods and topics to make the subject interesting and vital.

For the sake of brevity we shall simply enumerate the features of the book especially worthy of attention. The commendable features are: (1) the historical notes, especially such a table as presented on p. 275—a much-neglected but important topic of mathematics courses; (2) the selection of problems which emphasize the correlation of the branches of mathematics, physics, domestic science, and manual training; (3) the graphic work, scattered throughout the text where needed; (4) the needed emphasis on the importance of checking work; (5) the geometric representation of algebraic products; (6) the treatment of factoring, not too exhaustive in first presentation and given immediate application; (7) the list of common errors in fraction work; (8) the use of formulas derived from various sources for evaluation, transformation, and translation, both from English into algebraic symbolism and vice versa.

No book is perfect, and we shall consider the following as the defects of the text in question: (1) chaps. x and xi should have a more exhaustive treatment; (2) the formulas and applied problems and the formal drill problems seem insufficient in number; (3) there are no miscellaneous reviews. But surely we can forgive and forget these defects, which are minor in comparison with the numerous important advantages listed above. We repeat our commendation of the selections of problems, historical material, treatment of graphic work, and emphasis on checking.

C. B. WALSH

THE ETHICAL CULTURE SCHOOL
NEW YORK CITY

The Teaching Botanist. By W. F. GANONG. New York: Macmillan, 1910. Pp. xi+439. $1.25 net.

Botany for High Schools. By GEORGE F. ATKINSON. New York: Henry Holt & Co., 1910. Pp. xvi+493. $1.25.

Laboratory Botany. By WILLARD N. CLUTE. Boston: Ginn & Co., 1909. Pp. xiv+177. $0.75.

These three books represent late contributions to the teaching of botany. All three authors are known to the botanical public and all have published books before this.

The new edition of Ganong's unique work on the pedagogical aspects of botany has been awaited with interest by teaching botanists. It does not disappoint. The first edition is here expanded in almost every part both by the introduction of material wholly new and by the elaboration of the previously treated topics. Especially notable is the addition of new material in the chapters on laboratories, collections, and books. The author has not feared to enter into the minor details which are so essential to success in these matters and has yet escaped making this part of his book dull and uninteresting. These chapters ought to prove a boon to isolated teachers who often do not know where to turn for supplies, books, and the like and who have no one of greater experience to whom they can appeal. Even those of broader experience will find the book invaluable as a compendium of details that one does not carry in his mind, as well as a source of fruitful suggestions regarding new methods which have been ripened in the author's experience.

The chapters on teachers and teaching retain their well-known excellence and have been considerably enlarged. They are too well known to need comment.

Mr. Atkinson has added a very serviceable book to the growing list of high-school texts in botany. There is a very evident effort to bring the subject-matter into relation with the experience of the pupils resulting in the introduction into the body of the text of a very considerable amount of economic material and applied science. The book has gained distinctly by thus recognizing the strictly scientific character and educational value of this body of material, which is too often relegated to a sort of unorganized appendix at the close of the book or omitted altogether. The process of assimilation might very well have been carried yet farther by making a similar disposition of the greater part of the last six chapters. Certainly "Economic Plants," "Ecology," "Plant Societies," and "Plant Breeding" are topics which are not entirely at home in a part which is devoted to "General Morphology."

It appears obvious that an elementary textbook ought to emphasize the unity of the subject rather than its divisions. This Mr. Atkinson does consistently, with the exception of the last six chapters, which contain the residuum of unclassified material referred to above. It is certainly open to question whether material has any place in a textbook if it cannot be brought into close relation with the plan of organization of the book.

The point of view is frankly structural in that the approach to every subject is through a study of the structures concerned. Naturally, Part I exhibits the familiar sequence of topics: seed, stem, root, leaf, and flower. In this respect the book is probably not quite up to the present practice of the schools, at least in the West. Many teachers now embody in their practice the idea that organs are to be interpreted as devices for the efficient performance of functions. The study of function therefore introduces the study of the organ. The inconsistencies which arise when the study of plant functions is dominated by the treatment of the organs is well illustrated by the attempt to place respiration as a leaf function.

The faults mentioned appeal to the secondary-school teacher as serious ones, but it must be remembered that they are not peculiar to this text. They are the faults of the whole class. Many of them are less evident in this book than in

its predecessors. The treatment of the topics is fresh, interesting, and teachable. The unity of the subject is well preserved, and the practical side is emphasized. The illustrations are well chosen and well executed. The language is not especially difficult, though it may be doubted whether it is entirely within the comprehension of first-year pupils. The book must be accepted as one of the best now available. It is to be regretted that it is marred by several unfortunate errors in English.

The book by Mr. Clute is the outgrowth of his experience in the high-school laboratory. It consists of detailed laboratory directions, most of which are on structural topics. Those teachers who do not prefer to write their own directions will find this book very useful.

The separation of the physiological experiments from the remainder of the work appears to favor a separation of physiological from structural study, which the author of the book would be quick to condemn.

To each chapter there is added a short glossary including such technical terms as are needed for the work outlined. The idea is a good one.

W. L. EIKENBERRY

THE UNIVERSITY HIGH SCHOOL
THE UNIVERSITY OF CHICAGO

Representative English and Scottish Popular Ballads. By R. ADELAIDE WITHAM [Riverside Literature Series]. Boston: Houghton Mifflin Co., 1909. Pp. 187. $0.40.

The general editor, Professor W. A. Nielson, introduces the volume with the remark that it "is designed to meet the needs of a less advanced class of students than is provided for in the comprehensive collections of the late Professor Child or in the edition by Kittredge and Sargent in the Cambridge Poets series." And we may well believe that a niche has long been standing vacant which this volume is destined to fill. Narrative poetry of this type, belonging as it does to the youthful period of popular culture, is excellent for firing the schoolboy's imagination, and to this end should early be introduced into the curriculum. The editor, Miss Witham, has entered into her task with an enthusiasm that ought to infect the young reader and awaken an avid desire to know more of these popular ballads. Her introduction, which shows a good grasp of the subject and a genuine appreciation of the charm that is the ballad's, is written in an entertaining style, and is enlivened by numerous examples and comparisons relative to various phases of ballad study. It briefly discusses origins, structure, subject-matter, characteristics, versification, the later history, and the dates of the ballads.

Among the points calling for comment is naturally the portion dealing with origins, which is always a kittle question and must ever bear the brunt of attack. Suffice here to say that the editor reviews succinctly the three main theories current among literary folk today, with a leaning toward the camp headed by Professor Gummere. Superstition is present in far larger quantities than is implied in one of the editor's remarks; in fact, the pagan survivals are so numerous and so insistent as to give a distinct impress to the ballads, especially to that class called by Professor W. M. Hart the simple ballads of superstition.

Then again the statement that "the ballads never meant to be suggestive" needs some modification: frequently the emotional significance of a ballad depends wholly upon suggestion and not upon direct effort.

The ballads selected number thirty-seven. Every lover of ballads has his favorites which, if he were editor, he would prefer to see included in an edition. In place of the version of "Otterburn" given, I should print the one appearing in the Kittredge and Sargent edition and in place of "Chevy-Chace," "The Hunting of the Cheviot"; "The Baron of Brackley" for "Johnny Cock"; "Fair Annie" for "The Demon Lover"; and "Bonny George Campbell" and "The Bonny Earl of Murray" I should place side by side.

The notes and the glossary, which draw largely from Professors Child and Gummere, to whom due acknowledgment is made, iluminate the obscure points sufficiently to make the ballads intelligible.

EDWARD GODFREY COX

CORNELL UNIVERSITY

The Story of Sigurd the Volsung. Written in Verse by WILLIAM MORRIS, with Portions Condensed into Prose by WINIFRED TURNER and HELEN SCOTT. (Longman's Classbooks of English Literature.) London: Longmans, Green & Co., 1910. Pp. xi+136. 1*s.* 6*d.*

This volume consists of excerpts from Books I to III of Morris' epic poem "Sigurd the Volsung"; the portions of omitted verse are condensed into prose by the editors. The biographical notice is the authoritative one by J. W. Mackail, which occurs in the other Morris volumes of this series. In the introduction the editors locate the story in space and time (so far as anyone can locate the dim beginnings of an epic poem), make mention of the tribes concerned in the genesis and transmission of the "Volsunga Saga," and give the main characteristics of these tribes. They have also given a portion of Norse mythology necessary as a background for understanding the poem. The introduction further contains an outline of the three books of the poem used; at the end of the volume is a glossary.

Since the large volume containing the entire poem is too large and too costly for class use in secondary schools, where it is beginning to be studied, this little book will fill a needed place. The teacher of course will keep the larger copy on his desk and encourage the pupils to use it freely. Morris' poem has the charm of an original creation. The inclusion of Morris' epic in the school curriculum is no small contribution toward fitting students to understand our valorous ancestors who cheerfully accepted fate as set forth in the will of the Norns, who had no fear of death, and faced danger unafraid, who did not break their promise, and who divided fair.

In the condensed portions in prose, the editors have kept the atmosphere of the poem. The management of Sinfioth's parentage has been adroit, and yet the reader wonders why emphasis is laid upon his being "Sigmund's foster-son" rather than "Signy's son." This point is largely treated in Wagner's "Nibelung Ring," where nature performs the miracle, and truth to the old idea is no easy matter in this instance. Again the reader wonders why no mention is made of Book IV, which bears the sequence of Sigurd's life as

Book I does his antecedents. The reader somehow demands more knowledge of the curse of the gold. Did it go on? Was it ended? How? What became of Gudrun? Of Grinhild? How was the Nibelung tribe destroyed? Wagner shows the importance of this theme also. Since there are only one hundred and twenty-five pages given to the poem in their book, the editors must have had other reasons than a lack of space for what seem unfortunate omissions.

Some note giving an idea of the growth and main characteristics of the epic seems to the writer an absolute necessity in order to set the mind of a secondary-school student straight in the study of such a poem as "Sigurd the Volsung."

CHARITY DYE

THE SHORTRIDGE HIGH SCHOOL
INDIANAPOLIS, INDIANA

Syntax of the French Verb. By EDWARD C. ARMSTRONG. With exercises by DE LA WARR B. EASTER. New York: Henry Holt & Co., 1909. Pp. 192. $0.90.

There will always be a great diversity of opinion as to how to acquire a foreign language, and as to what constitutes acquirement. But most sensible people—possibly I should say teachers—will probably agree that, whatever the method, the process is bound to be a lengthy and laborious one. By laborious I do not necessarily mean irksome and full of drudgery, but rather that the process will be one that calls for patience and diligence. It is evidently from such a notion as this, based on a well-founded belief that the French verb presents peculiar difficulties to the learner, that the present text has been prepared.

At the very beginning the author has made it plain that the book is not a composition book, but a reference book, yet the exercises which constitute the last forty-three pages give opportunity for drill and test. Used in connection with written work for advanced pupils the text is sure to meet with favor.

The book is well made. This applies in the first place to the mechanical makeup; the type, arrangement, and other details of composition make the page attractive to the eye. But the book is well made in a better sense—it is a scholarly and painstaking treatment of the verb in its varying relations and uses. And this is no easy thing in a language which presents such a difference between the colloquial and the literary style as French does.

A rational scheme is followed in the arrangement of subject-matter; some twenty-four pages are given to a discussion and illustration of the verb in its common uses, relations, and agreements; then come fifty pages or more devoted to tense and mood. The subjunctive, the *bête noir* of teachers and pupils, is treated in a very practical and successful way, especially if reinforced by abundant drill in composition. The remaining thirty pages deal largely with the infinitive, and here again one notices the excellence of the author's work.

Taken all in all, the book forms a desirable help to the study of French in classes where the aim is exactness and thoroughness.

R. CLYDE FORD

MICHIGAN STATE NORMAL COLLEGE
YPSILANTI, MICHIGAN

Questions in School Hygiene. By GUY MONTROSE WHIPPLE. Syracuse: C. W. Bardeen, 1909. Pp. 88.

The author states the purpose of this volume in the following words: "This Bulletin is devised to stimulate the interest of students and teachers, to afford a guide for reading and discussion, and a means for promoting and testing the intelligent assimilation of the subject-matter that it represents."

The volume contains selected lists of books, American periodicals, German works, and foreign periodicals on school hygiene, and lists of questions grouped under the various topics related to the construction, equipment, and sanitation of the schoolhouse, the hygiene of instruction, and the hygiene of the school child. At the beginning of each topic is given a list of selected references and suggestions for further reading.

The subject of school hygiene has developed so rapidly in the last few years that a well-arranged synopsis of the subject-matter and bibliography as presented in this book should prove very helpful to all teachers and students.

The wisdom of including strictly medical questions in a bulletin for laymen would be questioned by most physicians. On p. 72 appear the following questions: "620. What are the causes, symptoms, and methods of treatment in chorea or St. Vitus' dance? 621. What are the causes, symptoms, and methods of treatment in neurasthenia? 622. What are the causes and symptoms of epilepsy? What is the distinction between 'petit mal' and 'grand mal'? What is meant by Jacksonian, focal, and psychic epilepsy?"

The Body and Its Defenders. By FRANCES GULICK JEWETT. (The Gulick Series.) Boston: Ginn & Co., 1910. Pp. viii+342. $0.65.

This volume, and another book entitled *Good Health,* constitute a new two-book series of the Gulick hygiene books. The most essential material in three of the books from the five-book series has been condensed in his volume. The new point of view in hygiene instruction is well exemplified in the plan and in the method of treatment. Emphasis is placed on health and habits of right living, rather than on structure of tissues or the mere mechanical operation of organs. The latest scientific material on the sources of the common diseases, the method of avoiding them, and the problem of increasing vital resistance in the individual is presented clearly and concisely. One of the many valuable features of this book is the comparatively large amount of most interesting material on the hygiene of the nervous system. It is difficult to estimate the gain in national health, prosperity, and happiness that would result if the present generation of children learned and put into practice the health-principles contained in this book.

GEORGE L. MEYLAN

COLUMBIA UNIVERSITY

BOOKS RECEIVED

EDUCATION AND PHILOSOPHY

Report of the Commissioner of Education for the Year Ended June 30, 1910. Volume I. Washington: Government Printing Office, 1910. Pp. viii+662.

Some Present Aspects of the Work of Teachers' Voluntary Associations in the United States. By CARTER ALEXANDER. (Teachers College Contributions to Education, No. 36.) New York: Columbia University, 1910. Pp. vii+109. $1.00.

United States Bureau of Education, Bulletin 1910, No. 4, Whole Number 440. *The Biological Stations of Europe.* By CHARLES ATWOOD KOFOID. Pp. xiv+360. Bulletin 1910, No. 6, Whole Number 445. *Statistics of State Universities and Other Institutions of Higher Education Partially Supported by the State, for the Year Ended June 30, 1910.* Pp. 29. Washington: Government Printing Office.

Open Air Crusaders. A Report of the Elizabeth McCormick Open Air School. Together with a General Account of Open Air School Work in Chicago and a Chapter on School Ventilation. Edited by SHERMAN C. KINGSLEY. Chicago: The United Charities, 1910. Pp. 107. Illustrated. Sent free on request.

Plutarch on Education. Embracing the Three Treatises: "The Education of Boys," "How a Young Man Should Hear Lectures on Poetry," "The Right Way to Hear." By CHARLES WILLIAM SUPER. Syracuse: C. W. Bardeen, 1910. Pp. 192. $1.00.

The Higher Education as a Training for Business. By HARRY PRATT JUDSON. Chicago: The University of Chicago Press, 1911. Pp. 54. $0.55 postpaid.

Physical Training in and Out of School. By WILLIAM TORREY HARRIS. Syracuse: C. W. Bardeen, 1910. Pp. 35. $0.50.

A Critical Study of Current Theories of Moral Education. By JOSEPH KINMONT HART. Chicago: The University of Chicago Press, 1910. Pp. v+48. $0.53 postpaid.

Education in Relation to the Christianisation of National Life. New York: Published for the World Missionary Conference by the Fleming H. Revell Co., 1910. Pp. xx+471.

Introduction to Philosophy. By WILLIAM JERUSALEM. Authorized Translation (from the fourth edition) by CHARLES F. SANDERS. New York: Macmillan, 1910. Pp. x+319. $1.50 net.

Wider Use of the School Plant. By CLARENCE ARTHUR PERRY. With Introduction by LUTHER HALSEY GULICK. New York: Charities Publication Co., 1910. Pp. xiv+423. Illustrated. $1.25.

Moto-Sensory Development. Observations on the First Three Years of a Child. By GEORGE V. N. DEARBORN. Baltimore: Warwick & York, 1910. Pp. v+215. With frontispiece. $1.50.

ENGLISH AND GERMAN

Standard English Classics. *Shakespeare's A Midsummer-Night's Dream.* For Use in Schools and Classes. With Introduction and Notes Explanatory and Critical by HENRY N. HUDSON. 1908. Pp. 128. *Rosalynde, or Euphues' Golden Legacy.* Edited with Introduction and Notes by EDWARD CHAUNCEY BALDWIN. 1910.

Pp. xxvii+133. $0.35. *Macaulay's Essays on Clive and Hastings.* Edited with Introduction and Notes by CHARLES ROBERT GASTON. 1910. Pp. xxiv+268. With a map. $0.35. Boston: Ginn & Co.

The Speech for Special Occasions. Edited by ELLA A. KNAPP and JOHN C. FRENCH. New York: Macmillan, 1911. Pp. xlv+397. $1.10 net.

Favorite Fairy Tales. The Childhood Choice of Representative Men and Women. New York: Harper, 1907. Pp. xxii+355. Illustrated by PETER NEWELL. $1.50.

Practical Guide to Accurate German Pronunciation. By EDWARD ALBERT GROSSMANN. New York: Privately Printed by the Author (33 W. 67th Street), 1910. Pp. v+49. $0.50.

SOCIOLOGY AND ECONOMICS

Sociology and Modern Social Problems. By CHARLES A. ELLWOOD. New York: American Book Co., 1910. Pp. 331. $1.00.

Industrial Studies. United States. By NELLIE B. ALLEN. Boston: Ginn & Co., 1910. Pp. xii+335. Illustrated. $0.65.

Elements of Business Arithmetic. By ANSON H. BIGELOW and W. A. ARNOLD. New York: Macmillan, 1911. Pp. xii+258. $0.70.

SCIENCE

Elementary Physiography. By ROLLIN D. SALISBURY. (American Science Series—Elementary Course.) New York: Henry Holt & Co., 1910. Pp. xi+359. Illustrated. $1.30.

A Laboratory Manual of Physical Geography. By R. S. TARR AND O. D. VON ENGELN. For use in connection with a general course in physical geography in high and secondary schools and in colleges. New York: Macmillan, 1910. Pp. xvii+362. With maps. $1.25 net.

An Introduction to Zoölogy. By ROBERT W. HEGNER. New York: Macmillan, 1910. Pp. xiv+350. Illustrated. $1.90 net.

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Educational Agriculture. By JOSIAH MAIN. Hays, Kansas: Western State Normal School, 1910. Pp. 74.

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Handwork in Wood. By WILLIAM NOYES. Peoria, Illinois: The Manual Arts Press, 1910. Pp. 231. $2.00.

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The Land of Living Men. By RALPH WALDO TRINE. New York: Thomas Y. Crowell & Co., 1910. Pp. x+288+xiv. $1.25.

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CURRENT EDUCATIONAL LITERATURE IN THE PERIODICALS[1]

IRENE WARREN
Librarian, School of Education, The University of Chicago

ABBOTT, ALLAN. High school journalism. School R. 18:657–66. (D. '10.)

ADKINS, FRANK J. The compulsory evening school. Journ. of Educa. (Lond.) 42:789–91. (D.'10.)

ARMSTRONG, JAMES E. The high school lunch room. Educa. Bi-Mo. 5:154–58. (D. '10.)

BAGLEY, WILLIAM C. The Illinois educational commission. School R. 18:667–73. (D. '10.)

BAILEY, HENRY TURNER. Lest we forget drawing. Journ. of Educa. (Bost.) 72:651–52. (29 D. '10.)

BALDT, LAURA I. The relation of arithmetic to domestic art. Atlantic Educa. Journ. 6:7. (Ja. '11.)

BENNETT, CHARLES A. Visiting manual training schools in Europe. (7) Man. Train. Mag. 12:143–68. (D. '10.)

BENSON, ARTHUR C. The place of classics in secondary education. Liv. Age. 49:666–73. (D. '10.)

BERLE, A. A. Business men and education. Journ. of Educa. (Bost.) 72:653–54. (29 D. '10.)

BODINE, WILLIAM L. The value of compulsory education laws to school attendance. Educa. Bi-Mo. 5:140–42. (D. '10.)

BOLAND, GENEVIEVE. Taking a dare. Pedagog. Sem. 17:510–24. (D. '10.)

BROOKS, STRATTON D. Vocational guidance. School R. 19:42–50. (Ja. '11.)

BROWN, ELMER E. The lesson of the state universities. Educa. 31:280–88. (Ja. '11.)

BURNHAM, WILLIAM H. European investigations in school hygiene. Pedagog. Sem. 17:525–33. (D. '10.)

[1] Abbreviations.—Atlantic Educa. Journ., Atlantic Educational Journal; Col. Univ. Q., Columbia University Quarterly; Educa., Education; Educa. Bi-mo., Educational Bi-monthly; Educa. News, Educational News; Educa. R., Educational Review; Educa. T., Educational Times; El. School T., Elementary School Teacher; Journ. of Educa. (Bost.), Journal of Education (Boston); Jour. of Educa. (Lond.), Journal of Education (London); Liv. Age, Living Age; Man. Train. Mag., Manual Training Magazine; Pedagog. Sem., Pedagogical Seminary; Pop. Sci. Mo., Popular Science Monthly; Primary Educa., Primary Education; Relig. Educa., Religious Education; School R., School Review; School W., School World; Teach. College Rec., Teachers College Record.

CHAMBERLAIN, ARTHUR H. The vocational middle school. Man. Train. Mag. 12:105–13. (D. '10.)

CHARLES, FRED. Superannuation of teachers. School W. 12:441–43. (D. '10.)

CHASE, LEW ALLEN. Institutional history in the high schools. School R. 18:698–700. (D. '10.)

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CONDON, RANDALL J. What the schools need. Educa. 31:313–34. (Ja. '11.)

COPE, HENRY F. College leadership and Sunday school efficiency. Relig. Educa. 5:493–500. (D. '10.)

CURTIS, JOHN B. Instruction of the blind in the Chicago public schools. Educa. Bi-Mo. 5:117–20. (D. '10.)

DENIO, HERBERT W. The founding of the University of Berlin. Educa. R. 40:473–87. (D. '10.)

DUNBAR, OLIVIA HOWARD. Three-cent luncheons for school children. Outlook 97:34–7. (7 Ja. '11.)

DYKEMA, PETER W. Music in public schools: rote singing (1). Atlantic Educa. Journ. 6:5–6. (Ja. '11.)

Education in Uruguay. School W. 12:453–54. (D. '10.)

FINDLAY, J. J. The dullness of school-masters. Educa. T. 63:480–82. (D. '10.)

Four years of progress in the public schools of St. Paul. Journ. of Educa. (Bost.) 72:654–55. (29 D. '10.)

HALL, G. STANLEY. The national child welfare conference: its work and its relations to child study. Pedagog. Sem. 17:497–504. (D. '10.)

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HANUS, PAUL H. The training of college bred teachers. Educa. 31:302–12. (Ja. '11.)

———. Vocational guidance and public education. School R. 19:51–6. (Ja. '11.)

HARVEY, LORENZO D. Training parents by school and church. Relig. Educa. 5:416–27. (D. '10.)

HILL, DAVID SPENCE. The child and the reading habit. Relig. Educa. 5:461–72. (D. '10.)

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HODGE, RICHARD MORSE. The education of ministers. Relig. Educa. 5:458–61. (D. '10.)

JAGGAR, THOMAS AUGUSTUS. The duty of New England at the present time with reference to the endowed colleges and public schools. Educa. 31:289–301. (Ja. '11.)

JOHNSON, FRANKLIN W. The school party—its effects upon manners and morals. Educa. Bi-Mo. 5:165–68. (D. '10.)

———. A study of high school grades. School R. 19:13–24. (Ja. '11.)

JOHNSON, GEORGE R. Qualitative elimination from high schools. School R. 18:680–94. (D. '10.)

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KELLOGG, KATE S. An experiment in practical civics. Educa. Bi-Mo. 5:174–84. (D. '10.)

KEPPEL, FREDERICK P. The occupations of college graduates as influenced by the undergraduate course. Educa. R. 40:433–39. (D. '10.)

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KRAUSKOPF, CHARLES E. The work for crippled children in the public schools of Chicago. Educa. Bi-Mo. 5:121–27. (D. '10.)

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MCANDREW, WILLIAM, *Parens iratus:* his cause and cure. School R. 19:1–12. (Ja. '11.)

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MATTHEWS, BRANDER. University organization. Col. Univ. Q. 13:67–73. (D. '10.)

MEEK, CHARLES S. State and local taxation for public schools. Teach. College Rec. 11:43–54. (N. '10.)

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MONTAGUE, WILLIAM PEPPERELL. Philosophy in the college course. Educa. R. 40:488–98. (D. '10.)

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O'SHEA, M. V. Readings in great educators: Education according to nature. Primary Educa. 19:5–6. (Ja. '11.)
OSBORN, HENRY F. Huxley on education. Col. Univ. Q. 13:25–38. (D.'10.)
PATON, STEWART. University reforms. Pop. Sci. Mo. 78:52–70. (Ja. '11.)
PHILLIPS, ELIZABETH W. British teachers for western Canada. School W. 12:448–51. (D. '10.)
PRESSLAND, A. J. The English public school as a training school of citizenship. Educa. R. 40:499–511. (D. '10.)
PROSSER, WILLIAM C. Teachers' compulsory insurance. Teach. College Rec. 11:14–42. (N. '10.)
RUSK, ROBERT R. Experimental education. Journ. of Educa. supplement. (Lond.) 32:835–38. (D. '10.)
ST. JOHN, EDWARD PORTER. Preparing the minister as an educator. Relig. Educa. 5:445–57. (D. '10.)
School education in Cape Colony. School W. 12:451–53. (D. '10.)
SHEPHERD, JOHN WILKES. The social spirit in the class room. Educa. Bi-Mo. 5:169–73. (D. '10.)
SIMONS, SARAH E. Imitative writing in the high school. Pedagog. Sem. 17:451–79. (D. '10.)
SNEDDEN, DAVID. The certification of high school teachers. Educa. 31:335–38. (Ja. '11.)
STAMPER, ALVA W. The financial administration of student organizations in secondary schools. School R. 19:25–33. (Ja. '11.)
STILLMAN, BESSIE W. An experiment in teaching reading. Atlantic Educa. Journ. 6:7. (Ja. '11.)
TIRRELL, WINTHROP. Summer apprenticeship in the Boston high school of commerce. School R. 19:34–41. (Ja. '11.)
The value of a country education to every boy: a talk with the host of Craftsman farms. Craftsman 19:389–94. (Ja. '11.)
WADE, FRANK B. On the ethical value of school athletics. Educa. Bi-Mo. 5:159–64. (D. '10.)
WALLIN, J. E. W. A boy's exposition. Pedagog. Sem. 17:505–9. (D. '10.)
WATT, WILLIAM E. Fresh air in the school and home. Educa. Bi-Mo. 5:148–53. (D. '10.)
WILEY, FRANK L. The layman in school administration. Teach. College Rec. 11:2–13. (N. '10.)
WILLSON, ALBERT CLARK. School administration and supervision in Connecticut. Teach. College Rec. 11:55–69. (N. '10.)
WORKS, GEORGE A. Suggestions for a practical course in high school botany. School R. 18:674–79. (D. '10.)

NOTES AND NEWS

The various and now somewhat isolated efforts being made to provide instruction in the fine and industrial arts in public schools, are to be studied by five committees of the Illinois State Teachers' Association, with the object of considering the possibility of unifying these efforts and of relating them more closely to the other work of the schools. The committees were appointed by President Ella Flagg Young at the Chicago meeting of the Association during the holidays. There is a committee for elementary schools, Abbie E. Lane, chairman; one for secondary schools, Eugene Davenport, chairman; one for trade schools, Jane Addams, chairman; and one for normal schools, Alfred Bayliss, chairman. The chairmen of these four committees compose a fifth committee, with George H. Mead as chairman, to which the findings of the four committees are to be reported for consideration and recommendation.

An investigation of the need for industrial and commercial education in Chicago and a comparative study of present provisions in Chicago and

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in twenty-seven other cities is being conducted by the City Club of Chicago through its Committee on Public Education. The investigation includes a statistical study of conditions in the city bearing on elimination and retardation in the public schools, the supply of skilled labor in the leading industries, and the attitude of manufacturers, business men, and organized labor on the need for industrial and commercial schools. Educational tests have been given to over 600 working boys of school age. Three special investigators are conducting the work under the direction of the committee. It is expected that the results of the investigation will soon be made public.

A comparative study of elementary and high-school marks has been made by Walter R. Miles of the University of Iowa, the main object of which was to determine the extent to which pupils in the high school maintain the same relative standing which they had in the elementary school. The study was based on the records of 106 pupils in Iowa City, Iowa, who had completed at least the last four years of the elementary school and the first two of the high school. The conclusions reached, as stated in *The Pedagogical Seminary*, December, 1910, are:

Selected Books for the Secondary Schools

Latin

An Elementary Latin Course . *Potter*
A New Method for Cæsar . . *Potter*
Atlas of the Geography and History of the Ancient World . *Lord*
Cæsar—Gallic War, Books I–V *Johnston and Sanford*
Cicero—Select Orations . . *D'Ooge*
Latin Composition, *Daniell and Brown*
Ovid—Selections . . . . . *Nauts*
Virgil—Aen., I–VI . *Fairclough-Brown*

Other Popular Secondary Texts

A Physical Geography . . *Hopkins*
A Physical Geography Note Book *Merrill*
A Secondary Arithmetic . *Stone-Millis*
French Grammar . . *Colin-Sérafon*
Plane and Solid Geometry, *Stone-Millis*
An Advanced Rational Speller . *Daly*
Anthology of English Poetry, *Whiteford*
Composition-Rhetoric-Literature *Shackford-Judson*
Essentials of Chemistry, *Hessler-Smith*
The Cambridge Literature Series, *Hall*

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The Commission on College-Entrance Requirements in Latin has voluntarily dissolved. This action has been taken from a conviction that the recommendations of the commission cannot, for the present, be changed or extended without producing confusion. The general acceptance of the recommendations by the colleges gives assurance of that uniformity in the requirements which was the chief object sought in the creation of the commission.

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American Education, and will be edited by Francis W. Kelsey. It will contain, first, three papers by the editor on "The Present Position of Latin and Greek," "The Value of Latin and Greek as Educational Instruments," and "Latin and Greek in Our Courses of Study"; these will be followed by a paper on "The Nature of Culture Studies," by Robert M. Wenley. The greater part of the volume will be devoted to the Symposia, which have been published, as they appeared, in the *School Review* or the *Educational Review,* and also as Bulletins of the University of Michigan; the titles, and the names of the contributors, are as follows: I. "The Value of Humanistic, Particularly Classical, Studies as a Preparation for the Study of Medicine": Dean Victor C. Vaughan, Dr. Charles B. G. de Nancrède, Dean Wilbert B. Hinsdale; II. "The Value of Humanistic Studies as a Preparation for the Study of Engineering": Professor Herbert C. Sadler, Professor Gardner S. Williams, Professor George W. Patterson, Associate Dean Joseph B. Davis; III. "The Value of Latin and Greek as a Preparation for the Study of Law": Merritt Starr and Lynden Evans, of the Chicago Bar; Dean (now President) H. B. Hutchins; Harlow P. Davock, Hinton E. Spalding, and Levi L. Barbour, of the Detroit Bar; IV. "The Value of Humanistic Studies as a Preparation for the Study of Theology": President William Douglas Mackenzie, Rev. A. J. Nock, Francis W. Kelsey, James B. Angell; V. "The Value of Humanistic Studies as a Training for Men of Affairs": James Bryce, James Loeb, and William Sloane (letters); John W. Foster, Charles R. Williams, Harvey W. Wiley, and James Brown Scott; VI. "The Classics and the New Education": Edward K. Rand, Robert M. Wenley, and Paul Shorey; VII. Appendix, "The Doctrine of Formal Discipline in the Light of Contemporary Psychology": Professor James R. Angell, the University of Chicago; Professor W. B. Pillsbury, University of Michigan, and Professor Charles H. Judd, the University of Chicago.

The volume will contain about 400 pages, and will be published by the Macmillan Company in March, 1911.

The generosity of a friend of the classics makes it possible for members of the American Philological Association and the Classical Association of the Middle West and South to provide themselves with copies of the volume, bound in cloth, at a reduced price of eighty-seven cents, provided the remittance is received before publication; after publication the price will be $1.50. In recognition of the fact that the Symposia have been published in the *School Review,* this reduced rate has been extended to the subscribers to the *School Review.* Members of the associations named or subscribers to the *School Review* who desire the volume are requested to remit eighty-seven cents ($0.87) by postal order to Mr. Louis P. Jocelyn, secretary of the Michigan Schoolmasters' Club, 545 South Division Street, Ann Arbor, Michigan. To all subscribers remitting this amount in advance the volume will be sent, carriage prepaid, as soon as it leaves the press.